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RELATING TO

ANTIQUITY

PUBLISHED BY THE

SOCIETY OF ANTIQUARIES OF LONDON

VOLUME LXXXVII

(SECOND SERIES, VOLUME XXXVII)

PRINTED AT OXFORD
BY JOHN JOHNSON FOR
THE SOCIETY OF ANTIQUARIES
AND SOLD AT THE SOCIETY'S APARTMENTS IN BURLINGTON HOUSE, LONDON
M CM XXXVIII

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I.—*The Egerton Genesis and the M. R. James Memorial MS.*

By Eric G. Millar, *Esq., D.Litt., F.S.A.*

Read 18th March 1937

In 1860 the British Museum purchased at Christie's a remarkable volume of illustrations to the Book of Genesis, which is now numbered Egerton MS. 1894. It formed part of a miscellaneous collection known as the Vienna Museum, which was said in the sale-catalogue to have been begun by the Emperor Maximilian I and enlarged by his grandson the Emperor Rudolph II, and to have been sold in 1782 to a certain Chevalier von Schönfeld, who added his own collection to it and opened it to the public under the title of the Technological Museum of Vienna. When sold in 1860 it was the property of Messrs. Lowenstein brothers of Frankfort on the Main.

The Egerton Genesis consists of twenty leaves of pictures, unfinished in parts, with one or two leaves missing after the first leaf and also at the end. The pictures are accompanied by some Anglo-French inscriptions explaining them, in two hands, the second of which has always been accepted as English, while the first was regarded as probably the work of an English scribe, although less unmistakably English in character. In 1921 a complete reproduction of the manuscript was edited for the Roxburghe Club by the late Dr. M. R. James, who had previously described it in a letter as 'the riddle of all medieval picture books'.

In his introduction Dr. James wrote as follows:—[1]

> It is not too much to say that of all the illustrated manuscripts that I have seen, this Egerton 1894 has been the most puzzling; and also, in view of the wonderful qualities of its drawing and colouring, one of the most fascinating. . . . There are two propositions about the book upon which a general agreement may be said to have been reached: one, that it is a work of the fourteenth century, and not early in that century,[2] the other that the second of the handwritings of the text (and most likely the first also) is English. The language of the text, moreover, is Anglo-French. When, however, it is asked of what nationality the artist was, where he worked, and what was the purpose of his book, I at least am reduced to conjecture. We know nothing of the history of the manuscript before it entered the Vienna Museum, and we do not

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[1] *Illustrations of the Book of Genesis, being a complete reproduction in Facsimile of the Manuscript, British Museum, Egerton 1894*, with an Introduction by M. R. James . . . Oxford, Printed for presentation to the Members of the Roxburghe Club, 1921, pp. 2–4.

[2] On p. 6 he writes 'in fact 1360 does not seem to me too low a date'.

> even know when that happened. The text, written by two persons, neither of whom need have been the artist, only tells us by its writing and language that it comes from an English sphere of influence. The pictures are the work of so original a hand that comparison with other illustrations of the time does not lead us far.
>
> There are doubtless many points in them which others will single out as distinctive. I will name three which strike myself. First, the manner in which trees are drawn: they are mushroom-like growths, masses of darkish green, with no branches projecting outside their firmly drawn outlines. Next, the care and interest lavished upon varying the expressions of the faces, which, one cannot but feel, are often designedly comic, and, in connexion with this, the rather cynical pleasure which the artist seems to take in illustrating incidents on which it is customary not to lay stress. Another technical matter is his interest in bold foreshortening of faces and in unusual attitudes. . . . The mastery of line, reminding one of Aubrey Beardsley's work, is astonishing; and there is in many of the pictures a quality recalling oriental drawings, which I find it hard to define, but which I cannot doubt others will agree with me in perceiving. . . . All these traits (to which, as I say, others will add) seem to put our artist in a place by himself. Of course no one, artist, writer, or inventor, is really without his context; yet here we have a man whom it is extremely difficult to fit into any setting. The publication of his work affords the best means of eliciting parallels to it, and naturally, no one would be better pleased than myself if, as a consequence thereof, I were directed to a group of productions of the same school. I have sometimes thought that Italy would prove to have a word to say in the matter: sometimes (and perhaps more reasonably) that relationship with Spain would emerge. A connexion with Germany was suggested to me as possible by Professor Sir W. Ridgeway, on the ground that the peculiar leg guards which form part of the saddle of the cavalry find their nearest parallels east of the Rhine. It is true that the manuscript is first heard of at Vienna; true also that exaggeration in portraying facial expression, and also perhaps non-avoidance of ugly subjects, are characteristic of some German art. But the language and script of the text are formidable obstacles to my acceptance of this view, the latter in particular. The best opinion I can obtain or form pronounces it English. Up to the present I have heard no suggestion which has seemed to be more plausible than that of Mr. Cockerell, that we ought to look to the region of Bordeaux, where at the date of the book a blend of French and English influence existed, and where, moreover, a Spanish element would not be surprising.

Plate I, from Egerton MS. 1894, f. 8, shows a characteristic page of the manuscript; the subjects illustrated are the parting of Abraham and Lot (Genesis xiii, 11), the promise to Abraham (*ibid.*, 14), and Abraham settling in Mamre and building the altar (*ibid.*, 18). For the other pages of this astonishing manuscript readers are referred to the complete reproduction.

Dr. James to the end of his life always had a feeling that the Egerton Genesis might ultimately prove to be of English origin. In a letter to the present writer following the publication of a book on English Illuminated Manuscripts in 1928 he wrote, 'Would that you could have made it appear that the Egerton Genesis has a place somewhere', and in a review of the same book in *The Times Literary Supplement*, 23rd February of that year, he added with reference to a hand-list of English MSS. contained in the book, 'We should ourselves have been inclined to include in it, even with a query, the enigmatic picture-book of Genesis in the British Museum (Egerton 1894) which has English connexions of some kind.'

The position remained unchanged until November 1936, when a quite unknown Psalter was sent round to the present writer at the British Museum for an opinion by Mr. Francis Edwards, the bookseller, who was considering its purchase from a private source in England. Besides containing a rather unusual form of the Psalter, each verse of the Latin being followed by a French translation,[1] the manuscript included some prayers at the beginning for the various canonical Hours, at each of which two events were described as having taken place: at Matins, the Mocking of Christ and the Resurrection; at Prime, Christ brought before Pilate and His appearance to St. Mary Magdalene; at Tierce, the Scourging and Pentecost; at Sext, the Crucifixion and the Annunciation; at None, the death of Christ on the Cross and the Ascension; at Vespers, the Descent from the Cross and the Last Supper; and at Compline, the Agony in the Garden and the Burial of Christ. Each of these prayers was illustrated by a miniature in two compartments, and a glance at these miniatures was enough to show that at last we had something definitely related in style to the Egerton Genesis. The resemblance was in fact so close, except for differences in the colouring, as to suggest identity of hand, and at least to make it almost certain that the two books originated at the same time and place. Further, not only were the writing and the rest of the decoration of this Psalter entirely English in character, but the Kalendar and Litany pointed strongly to the Diocese of Durham,[2] and as a result it could be safely claimed that the Egerton Genesis was also executed in England. It became, therefore, a matter of importance to secure this Psalter for the British Museum, if possible, as providing the only evidence for this claim. Mr. Edwards readily undertook the necessary negotiations, and wrote early in January 1937 to say that the owner was prepared to accept the very reasonable figure of £325 for it. It was then decided to invite contributions from some of

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[1] The text of the Psalter, f. 39 (see pl. IV) begins, 'Beatus uir qui non abiit in consilio impiorum et in uia peccatorum non stetit: et in cathedra *id est iudicio* pestilencie *id est falsitatis* non sedit. Beneit soit le bier que ne foreie el consail de sen grees et ne estuet en la voie des peccheours: et ne siet el iuggement de fausine.'

[2] E.g. the Kalendar contains, *in red*, John of Beverley (7th May), Godric (21st May), Oswin (20th August), Aidan (31st August), and the Translation of St. Cuthbert, marked 'duplex' (4th September), and, *in black*, Kentigern (13th January), Oswald, archbishop (28th February), Chad (1st March), Patrick (16th March), Wilfrid, bishop and martyr (24th April), Oswald, king and martyr (5th August), Paulinus (10th October), and Wilfred, bishop (12th October), while the Litany includes *Martyrs* Oswald, *Confessors* Cuthbert, Aidan, William [of York], Wilfred, Chad, Hugh [of Lincoln], Godric, Patrick, Bede, *Virgins* Ebba.

Dr. James's friends and to present the Psalter to the British Museum in his memory; the money was raised within a few weeks from a body of thirty-nine subscribers, and the manuscript was formally accepted by the Trustees on 13th March 1937, and has since been given the number Additional MS. 44949. The only matter for regret amongst all who knew him is that the manuscript did not come to light in Dr. James's lifetime, for it is difficult to think of anything that would have caused him greater satisfaction. But his friends felt that it would at least be appropriate that it should be permanently coupled with his name in the national collection.

Note on the Psalter, Add. MS. 44949

The MS. is on 304 leaves of vellum, measuring $10\frac{1}{8}$ in. by $6\frac{5}{8}$ in. The opening words of the second leaf are 'Domine ihesu Christe'. A modern pencil note on the front pastedown states, without foundation, that the MS. belonged to the 'Abbey of Tyrwardith [*sic*]', i.e. the Priory of Tywardreth in Cornwall, as a consequence of which a leather label 'Psalterium Tywardreth' has been affixed to the back of the volume, which is in its original wooden boards covered with dark brown leather of later date (sixteenth century?). Plates II–IV reproduce five pages of this manuscript, four for comparison with the plate from the Egerton Genesis, and the remaining one showing the decoration of the first page of the Psalter, which is in a more ordinary English style of the period. The subjects are:

Pl. II (*a*), f. 4:

Prayer for Prime. Miniature in two compartments: (i) Christ before Pilate; (ii) Christ appearing to St. Mary Magdalene. In the upper margin are directions for the illuminator in faded ink: 'Accusacio. Apparicio magdalene'.[1]

Pl. II (*b*), f. 4 b:

Prayer for Tierce. Miniature in two compartments: (i) The scourging of Christ; (ii) Pentecost. The foreshortened faces may be especially compared with those in the lower compartments of Egerton MS. 1894, f. 8, reproduced in pl. I. Directions for the illuminator in the upper margin: 'ligacio flagellacio' and 'Spiritus sancti missio'.

Pl. III (*a*), f. 5 b:

Prayer for None. Miniature in two compartments: (i) The Crucifixion; (ii) The Ascension; the foreshortened faces may again be compared with those in pl. I. Directions for the illuminator: 'Mortem autem crucis' and 'In celum ascensio'.

Pl. III (*b*), f. 6:

Prayer for Vespers. Miniature in two compartments: (i) The Descent from the Cross; (ii) The Last Supper. Directions for the illuminator: 'Deposicio de cruce', and 'Mandatum nouum'.

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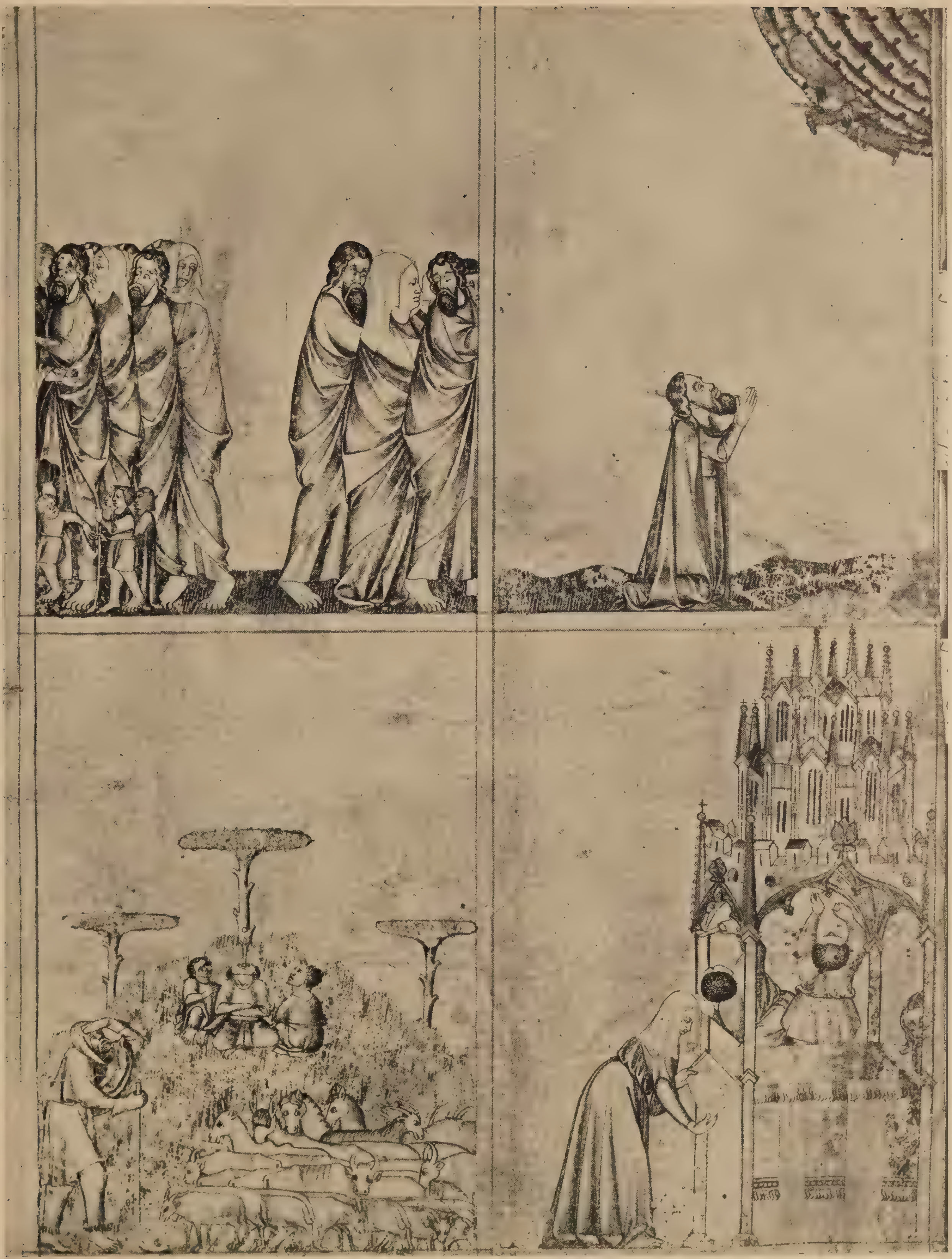
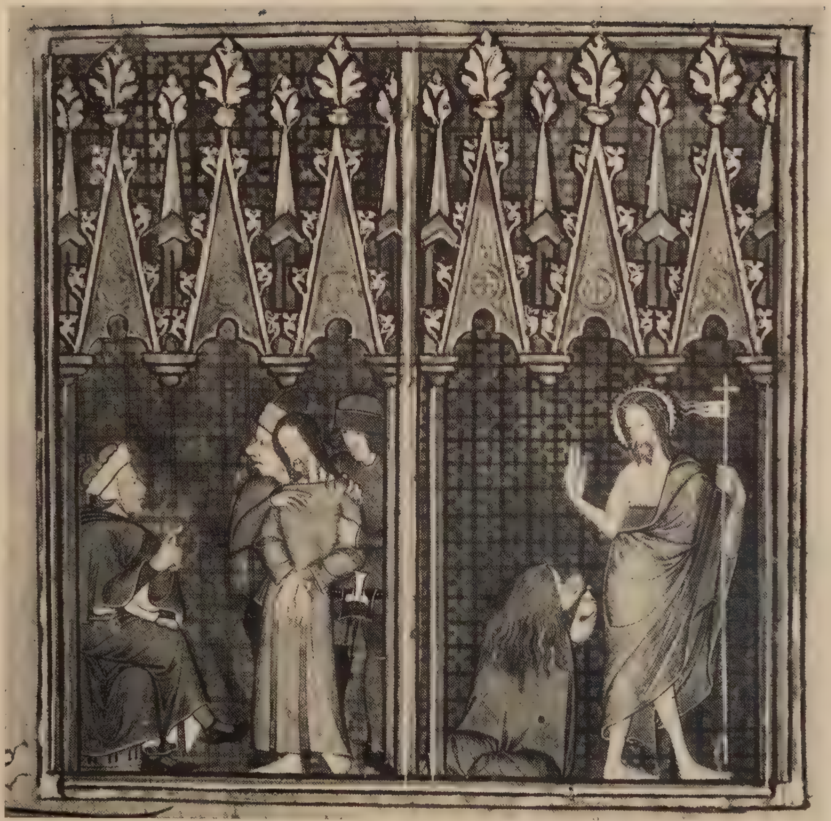
[1] These are fully recoverable under the ultra-violet lamp.

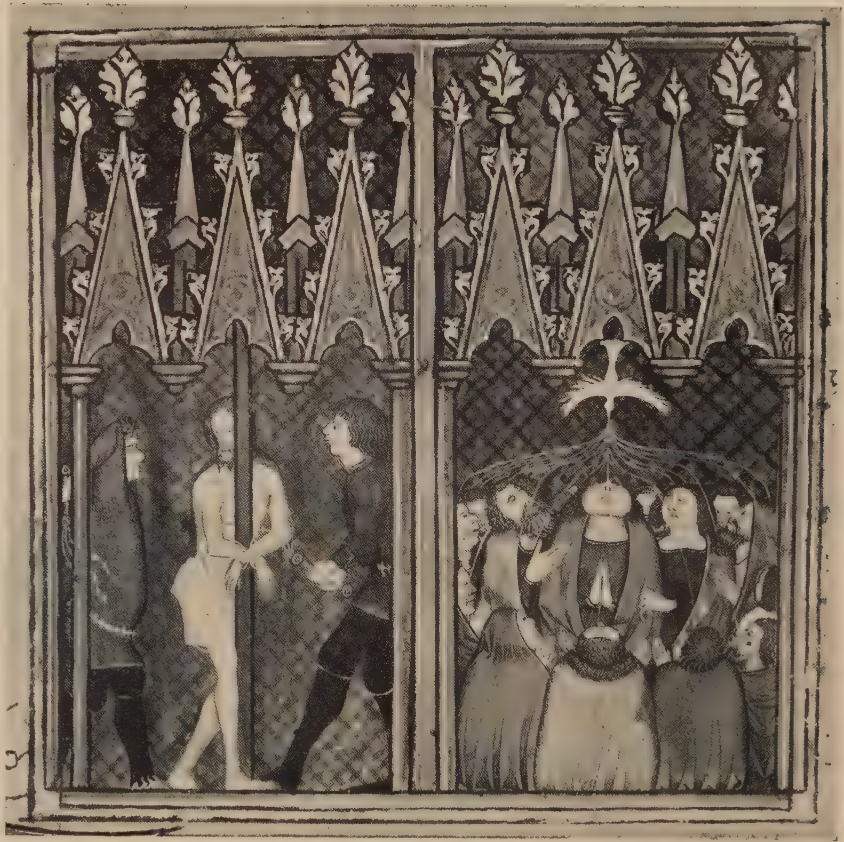


The Egerton Genesis: British Museum Egerton MS. 1894, f. 8

Published by the Society of Antiquaries of London, 1938

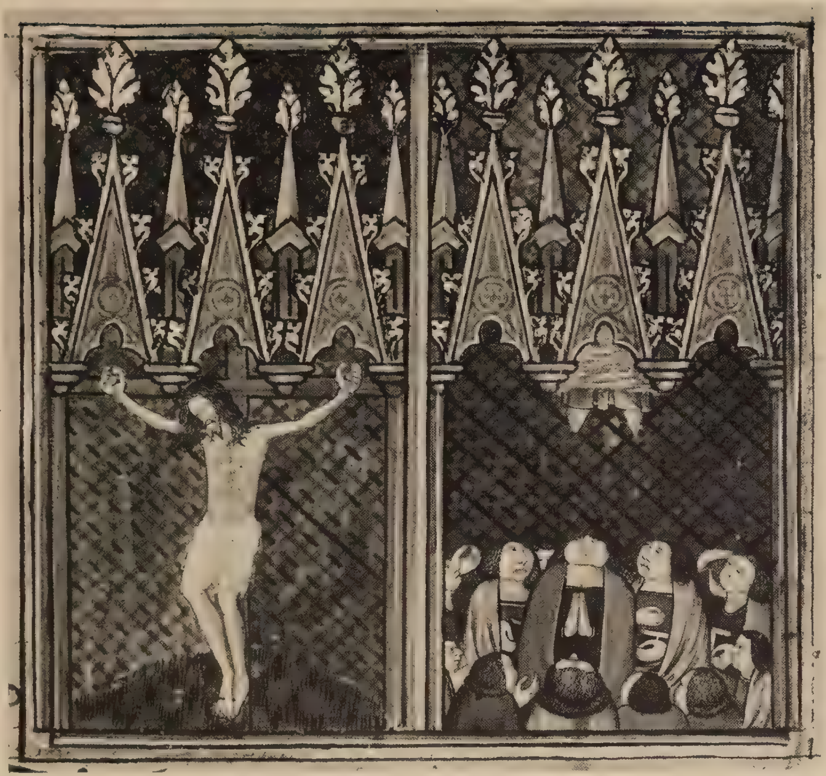


(*a*) The M. R. James Memorial MS.: British Museum Add. MS. 44949, f. 4

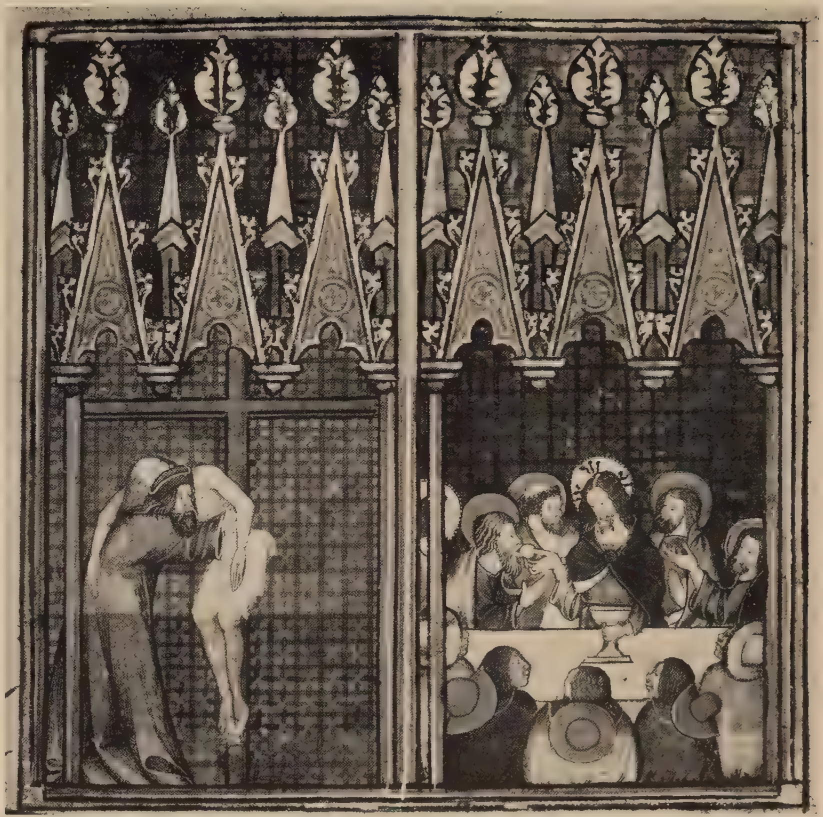


(*b*) The M. R. James Memorial MS.: British Museum Add. MS. 44949, f. 4 b

Published by the Society of Antiquaries of London, 1938

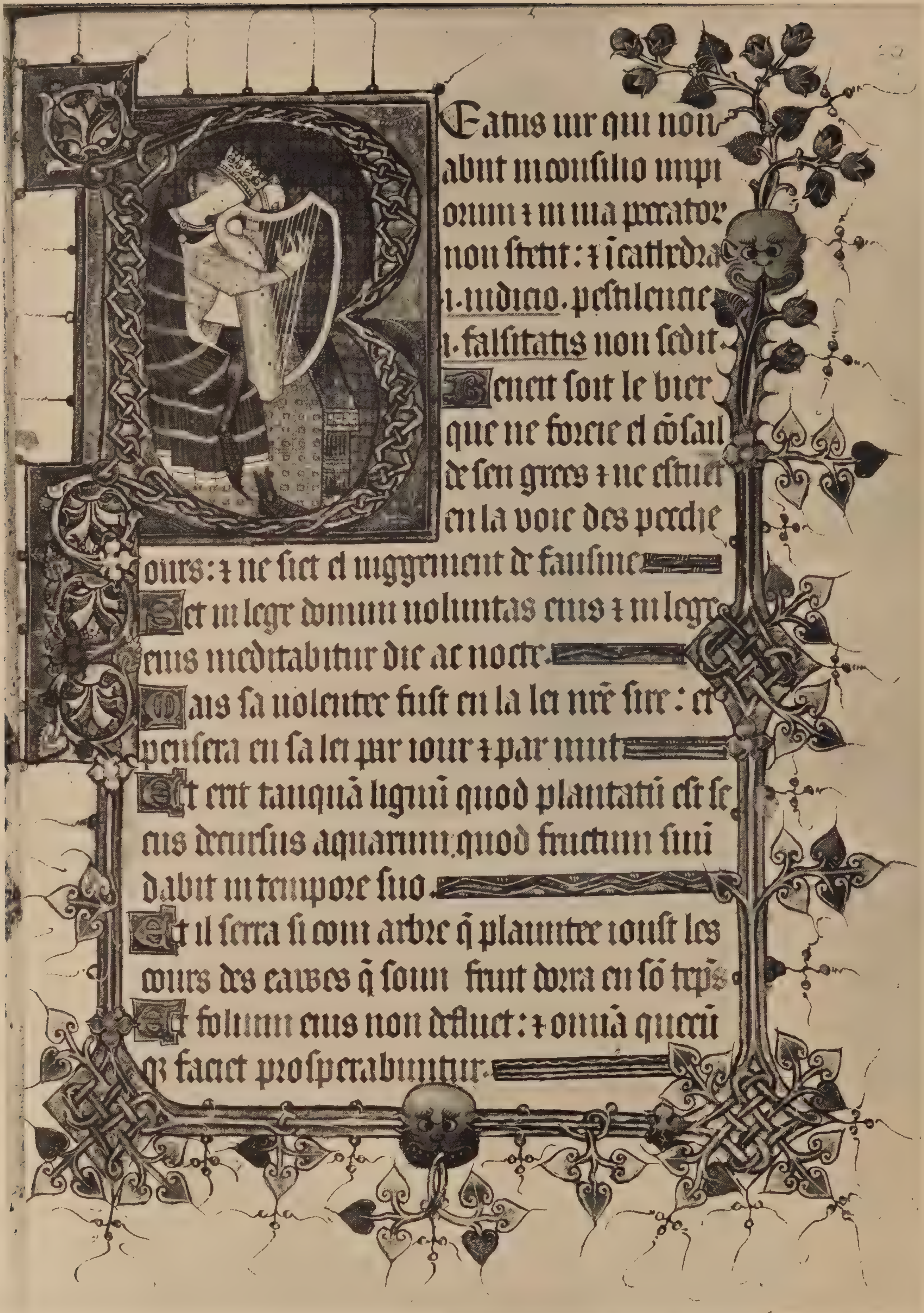


(*a*) The M. R. James Memorial MS.: British Museum Add. MS. 44949, f. 5b



(*b*) The M. R. James Memorial MS.: British Museum Add. MS. 44949, f. 6

Published by the Society of Antiquaries of London, 1938



Beatus uir qui non
abiit in consilio impi
orum ⁊ in uia peccator
non stetit : ⁊ in cathedra
i. iudicio. pestilencie
i. falsitatis non sedit.
Beneit soit le bier
que ne forcie el cõsail
de sen grees ⁊ ne estuet
en la voie des pecche
ours : ⁊ ne siet el iuggement de fausine
Et in lege domini uoluntas eius ⁊ in lege
eius meditabitur die ac nocte.
Mais sa uolentee fust en la lei nrẽ sire : et
pensera en sa lei par iour ⁊ par nuit
Et erit tanquã lignũ quod plantatũ est se
cus decursus aquarum, quod fructum suũ
dabit in tempore suo.
Et il serra si com arbre q̃ plauntee iouste les
cours des eawes q̃ soun fruit dorra en sõ tẽps
Et folium eius non defluet : ⁊ omnia quecũ
q3 faciet prosperabuntur.

The M. R. James Memorial MS.: British Museum Add. MS. 44949, f. 39

Published by the Society of Antiquaries of London, 1938

Pl. IV, f. 39:

Initial B of Ps. I, with miniature of David harping, and border of English style.

There are notes of charges for the painting of some of the initials in the lower margins of ff. 11 b, 13 b, 23 b, 31 b, 61 b, 229 b,[1] which, even if there were any doubt otherwise, are a clear indication that the whole MS., including the miniatures related to the Egerton Genesis, was produced in the same place. The notes have been partially cut away by the binder.

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[1] I have to thank Mr. F. Wormald for this list.

II.—*Recent Discoveries at the Church of the Nativity, Bethlehem*

By William Harvey, *Esq., and* John H. Harvey, *Esq.*

Read 25th November 1937

It has for many years been disputed whether the existing structure of the Church of the Nativity at Bethlehem were that built by Constantine, in the first half of the fourth century, or a later restoration or rebuilding under Justinian, some two centuries later.[1] The documentary evidence is insufficient to decide the point, as no unequivocal description of the present church exists earlier than that of Sophronius in A.D. 635, which describes the building as τρίκογχος, triple-vaulted, or tri-apsidal.[2] Unfortunately, this comes a century too late to decide the point at issue (pl. XIII).

One author alone describes the church as the work of Justinian: Eutychius, patriarch of Alexandria, writing shortly after A.D. 900. He states that the emperor ordered his legate to pull down the church, which was small, and to build a finer one in its place. When Justinian heard the description of the building erected, however, he became very angry, and ordered the architect to be beheaded.[3] This story has been regarded with suspicion on account of its somewhat mythological conclusion, and even more so because the Corinthian columns of the church have been accepted by most archaeologists as of fourth-century date. Viollet-le-Duc, on the other hand, believed that the whole building was the work of Justinian;[4] a necessary corollary to the dating problem was the subsidiary one, whether the building was all of one build, or of two or more.

The conclusion that the structure was of uniform date throughout was published by the Byzantine Research Fund in 1910,[5] but was questioned by Père Vincent of the French Dominican School of Archaeology in Jerusalem, in his monumental work on Bethlehem, published in collaboration with Père

[1] For statements of the problem, and divergent solutions, see W. Harvey and others, *The Church of the Nativity at Bethlehem* (Byzantine Research Fund), 1910; and L. H. Vincent and F. M. Abel, *Bethléem*, 1914.

[2] See his description in the *Anacreontics*, quoted by H. A. A. Cruso in W. Harvey and others, *op. cit.*, p. 57.

[3] *Eutychii Patriarchae Alexandrini Annales*, book ii, 288–90, quoted by H. A. A. Cruso as above. See also discussion on the original Arabic text in H. Vincent and F. M. Abel, *op. cit.*, p. 119, n. 1, and L. H. Vincent in *Revue Biblique*, January 1937.

[4] W. R. Lethaby in W. Harvey and others, *op. cit.*, p. 17. It seems doubtful whether Diehl's name should have been added to that of Viollet-le-Duc.

[5] W. Harvey and others, *op. cit.*

Abel in 1914.[1] Père Vincent's theory of dual construction rested on insufficient evidence, as indeed did any and every theory at that time, for the rivalry between the sects in possession of the church, and the attitude of the then Turkish administration, made scientific investigation practically impossible.

Père Vincent, however, made one discovery of great importance: that the foundations of the north nave wall continued as a straight line across part of the northern apse (pl. XIII). His discovery of this evidence of rebuilding was based on the appearance of the roof of one of the many grottoes beneath the church, and could not then be verified by excavation;[2] but it has now been fully borne out and amplified by the fresh facts at our disposal.

In the spring of 1934, the present writers were invited by the Government of Palestine to undertake a structural survey of the church fabric, with a view to ascertaining what repairs were necessary for its safety, which had been endangered by an earthquake in 1927.

The survey began in May, and at first it was not expected that there would be any opportunity for excavation or specifically archaeological investigations. On the 12th of June it was noticed that a part of the paving at the west end of the outer south nave aisle sounded hollow; as it had been observed that the rock above the grottoes was in many places in a bad condition, it seemed necessary to make certain that there was no cavity affecting the foundations of the colonnades. Permission to excavate a small area was readily granted by the Greek Orthodox Archbishop of Jordan, the Right Rev. Timotheos Themeles, without whose kindly co-operation, then and later, the work would have been impossible.

At this point we must record our thanks to all who officially or privately rendered assistance during the course of the work; to His Excellency the High Commissioner and to the various branches of his Administration; in particular to Mr. E. T. Richmond, Director of Antiquities, and his staff, who assisted in the supervision and recording of the work; and to Mr. Fawcett Pudsey, Director of Public Works, who was responsible for expediting its administrative and financial aspects; to the Orthodox, Latin, and Armenian Patriarchates in Jerusalem, His Grace the Orthodox Archbishop of Jordan, and the Very Reverend Superiors of the Franciscan and Armenian Convents at Bethlehem; to Mr. J. W. Crowfoot for his suggestions and help, both in Bethlehem, and during the preparation of this paper, and to Père Vincent, who in his frequent visits to the church gave us the benefit of his skilled knowledge and great experience in Eastern archaeology. Also our especial thanks to Professor Bernhard Gauer, of Düsseldorf, whose expert and quite honorary work saved one of the most

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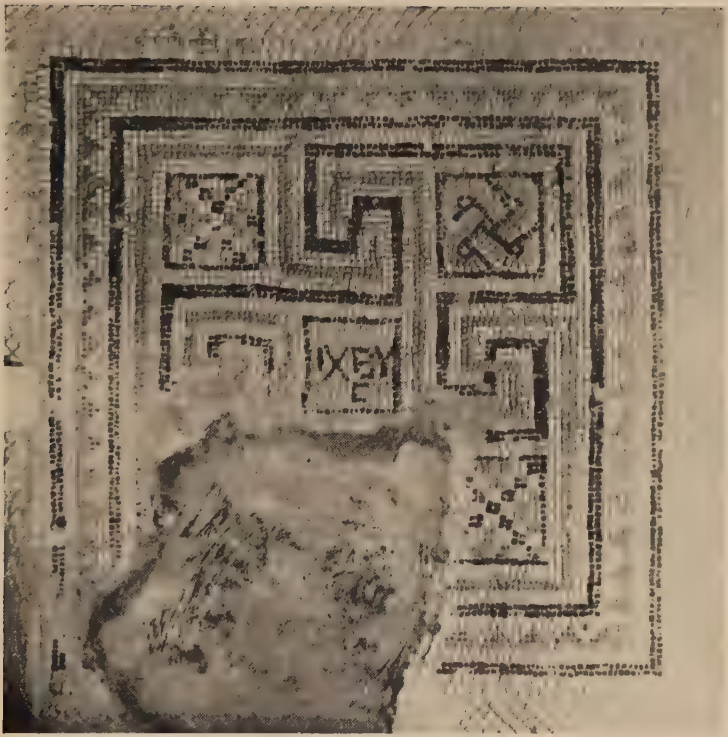
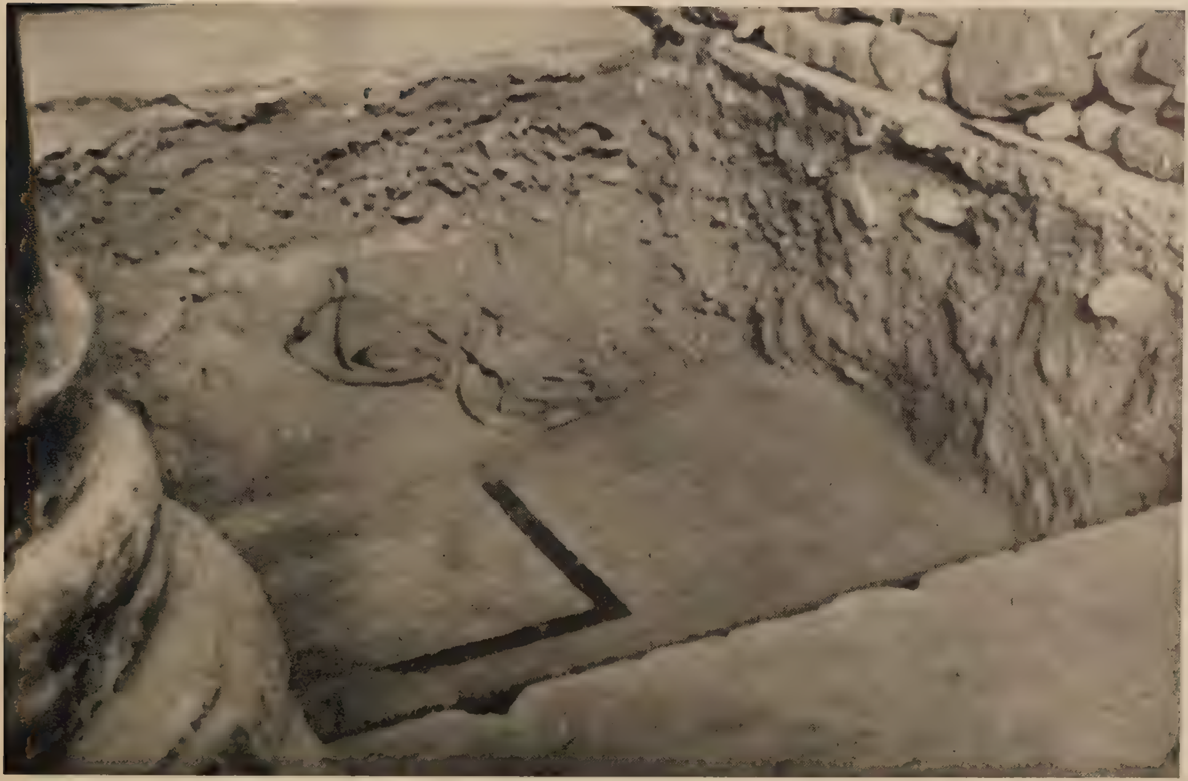
[1] L. H. Vincent and F. M. Abel, *Bethléem*, Paris, 1914.

[2] L. H. Vincent and F. M. Abel, *op. cit.*, p. 76, fig. 29, pl. II.



1. Mosaic panel with ΙΧΘΥΣ



2. Mosaic in south-west aisle of nave, first discovered

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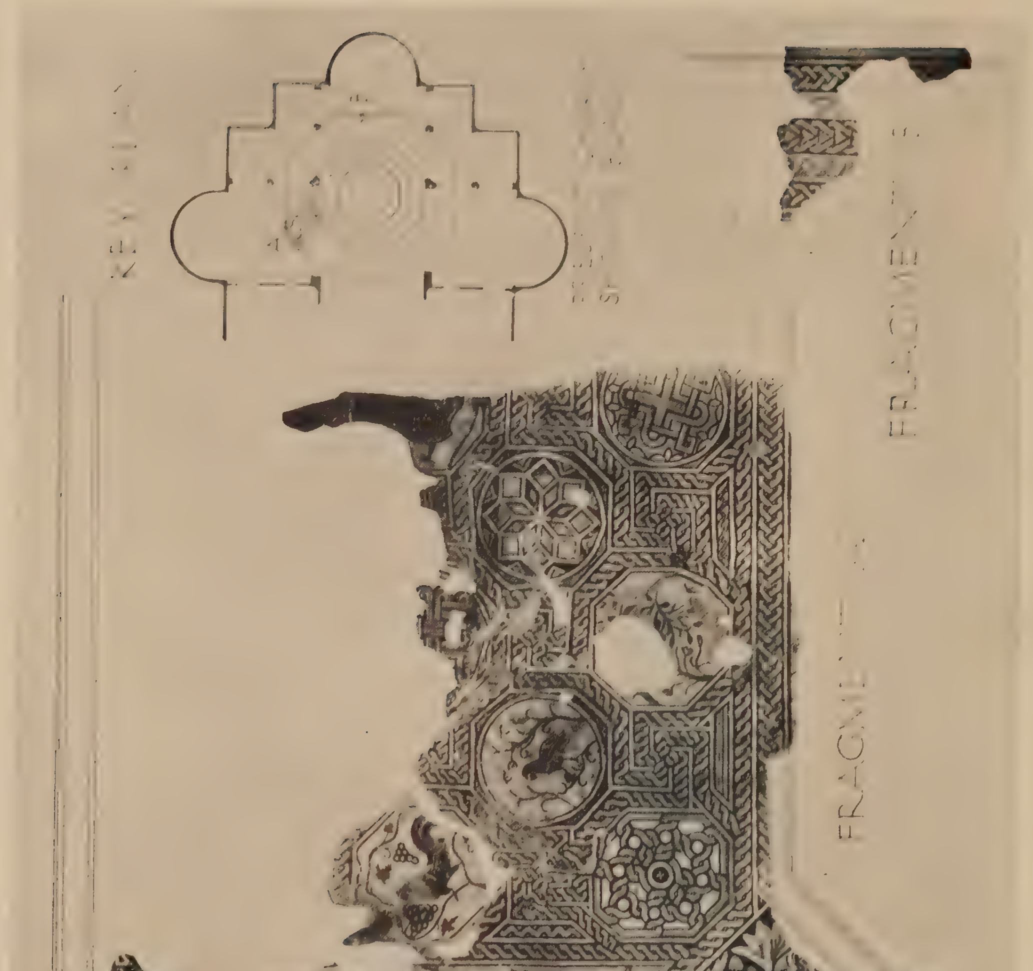
MOSAIC
FLOOR
AROUND
GROTTO
FOUND IN
CHURCH OF
THE NATIVITY
BETHLEHEM 1934
KEY PLAN
FRAGMENT
FRAGMENT
FRAGMENT

Mosaic of Octagon

Published by the Society of Antiquaries of London, 1938

valuable parts of the mosaic from immediate disintegration, and made it possible for casts of several portions to be taken by a special process of his own invention. We also owe a debt of gratitude to our foreman, Joseph Aboud, and to his gang of labourers who carried out the work with skill and enthusiasm.

The preliminary excavation resulted in the discovery, not of a cavity, but of rather loose filling to a depth of about 0·75 metre (say 2 ft. 6 in.), where it rested on a floor of white mosaic.

It seemed at first that this floor might belong to the existing church, and that pedestals existed below the column bases, but a slight extension of the cut showed that the nave colonnades rested on squared blocks standing on a stylobate wall, which cut through the earlier mosaic throughout (pl. v, 2). This was in itself sufficient to prove that the church stood on an earlier structure, but as an opportunity offered for exploration, permission was obtained to sink a further series of trial holes.

In the hope of finding a dedicatory inscription a cut was made on the north side of the steps leading from nave to crossing; this revealed the earlier steps, flanked by a small square panel (0·725 metre square) of a fretted design of swastikas with the word ΙΧΘΥC in the centre (pl. v, 1). According to Prof. F. J. Dölger of Bonn, this example of the ΙΧΘΥC formula is the earliest known to which an approximate date can be given.[1] In front of the bottom step a band of destroyed mosaic extended across the whole nave—it is possible that a dedicatory inscription may have existed here, as none was found elsewhere.

Excavation of part of the centre of the nave floor then began, with very encouraging results, and soon the whole of an extensive carpet of mosaic patterns was laid bare. Though severely damaged, enough of these patterns remained for reconstruction of the general layout to be possible and to show the original technique (pl. VII).

It was pointed out by Père Vincent in his book that many dimensions in the church seemed to be based on the Roman foot of 0·296 metre.[2] It was found that the mosaics revealed definite evidence of the use of this unit in the setting out, as several patterns had clearly been designed on a mesh of squares, each with a side of 0·25 Roman foot—a larger unit of 100 of these small squares (a square of 2·5 Roman feet) was commonly used for the individual pattern units, and the side of this unit was divided into 100 tesserae of the mosaic. This setting out can best be understood in an actual example from the mosaic (fig. 1).

It seems clear that pattern-books of designs on 'squared paper' or parchment must have been current, just as at a much later date manuals of hagiography were compiled, such as the fifteenth-century 'Painter's Guide' of Mount

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[1] F. J. Dölger in *Antike u. Christentum*, 5 (1936), 81–6, quoted in *Byzantinische Zeitschrift*, 1936, Heft 2, p. 518.

[2] Vincent and Abel, *op. cit.*, p. 38, n. 1.

Athos, by Dionysios of Fourna.[1] Mr. Avi-Yonah, in his Corpus of Palestine Mosaics published in 1933, remarks on this fact, and describes his work as an attempt to reconstruct the pattern-books which were in use; an attempt in which his patience has been singularly successful.[2] A close parallel to the fret-pattern of the panel containing the word ΙΧΘΥC was found at Leicester, and has been published.[3]

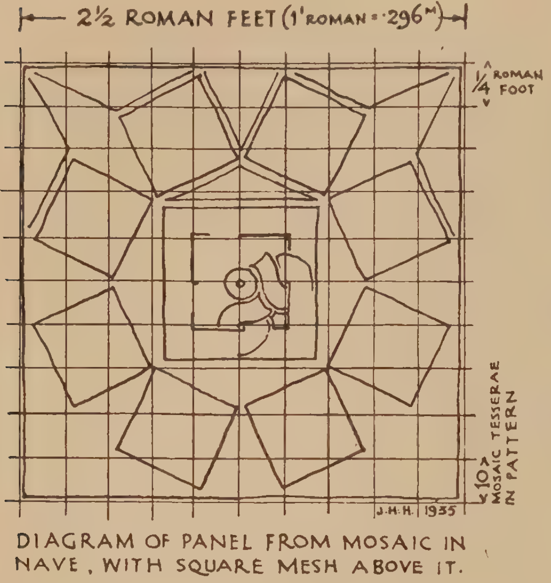
2½ ROMAN FEET (1' ROMAN = ·296m)
¼ ROMAN FOOT
10 MOSAIC TESSERAE IN PATTERN
J.H.H. 1935
DIAGRAM OF PANEL FROM MOSAIC IN NAVE, WITH SQUARE MESH ABOVE IT.

Fig 1. Diagram showing setting out of mosaic panel

Excavations of the north transept, crossing, and eastern arm of the church exposed an octagonal sanctuary with a central circular well above the grotto. Octagonal steps led down from this to a surrounding mosaic, fragments only of which remain (pl. VI). The circular stone kerb surrounding the well seems to have been provided with a screen, probably of bronze, supported on uprights set in grooves in the outer face of the stonework. The stair down to the grotto must almost certainly have been at the west.

The mosaics here were of a much more delicate character than those of the nave, and the tesserae are much smaller; in the nave, about 200 tesserae cover a square of 10 centimetres, while in the octagon the number rises to 400 or even 500. These numbers of tesserae are unusual, and in Palestine at any rate, unique; Mr. Avi-Yonah has only one example with so many as 157 tesserae to a 10-centimetre square.[4] The same applies to the plain white mosaic; his finest example runs to 42 tesserae and he states that over 30 is exceptional;[5] at Bethlehem the figure for plain white surrounds is 55. From the point of view of workmanship, these floors are then the finest which have yet come to light in Palestine, as was to be expected in the case of one of the supreme sanctuaries of Christendom, adorned with all the wealth of Imperial Rome.

Of the existing portions of the pattern, a small octagonal panel containing the figure of a cock was the best example of mosaic craft. When found, its condition was extremely fragile, but it was saved from disintegration on expo-

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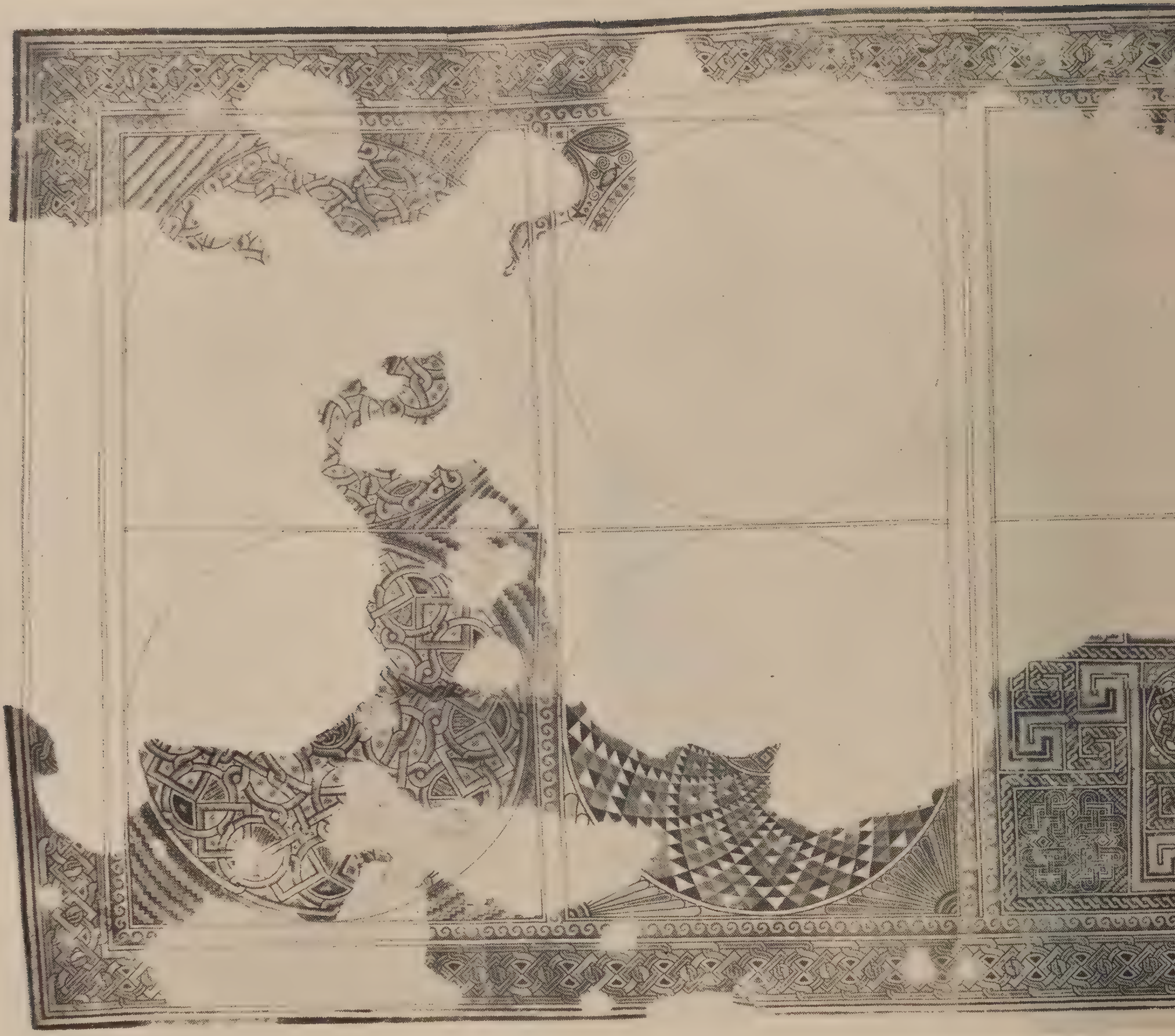
[1] See O. M. Dalton in W. Harvey and others, *op. cit.*, p. 49 and note 2.

[2] M. Avi-Yonah in *Quarterly of the Department of Antiquities in Palestine*, i, 136, and iii, 73.

[3] Nichols, *History of Leicestershire*, i, reproduced in *V.C.H. Leicestershire*, ii, 16, pl. v.

[4] M. Avi-Yonah in *Q.D.A.P.*, iii, 72.

[5] *Ibid.*, iii, 61.



Mosa

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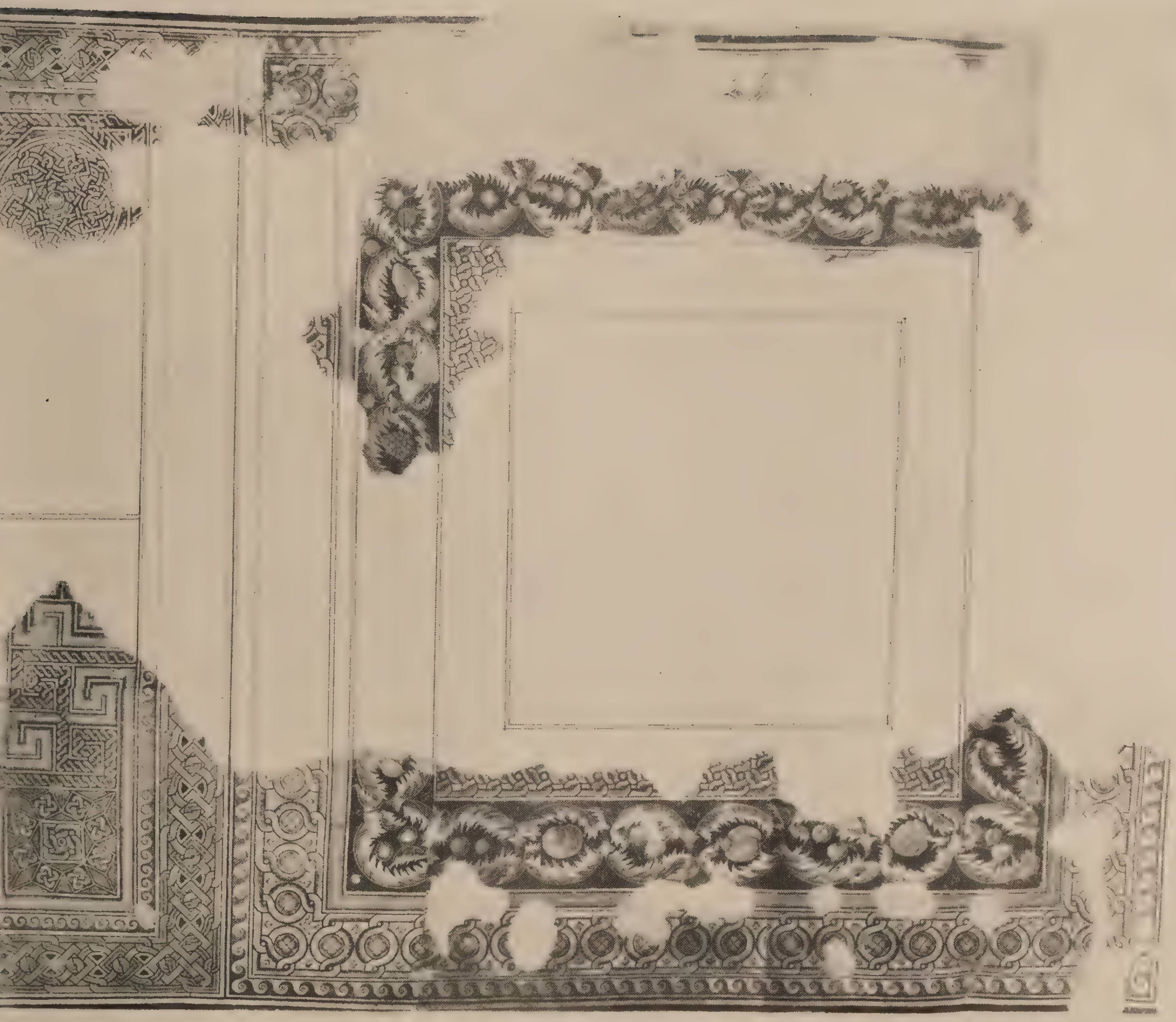

al nave

uaries of London, 1938

sure to the air by the painstaking and expert work of Professor Gauer, who cleaned the surface piecemeal, and consolidated it by patient sponging with liquid mortar (pl. VIII, 1).

The very varied motives used in the mosaics suggest that they were the work of a mixed gang of craftsmen, or, at any rate, that influences from different parts of the Empire were at work in the selection of the patterns. It is, however, noteworthy that in almost all the patterns the fylfot or swastika form is somewhere present: in the nave carpet, in the small square panels, and in the octagonal surround to the grotto; a common factor thus brings a note of unity to a series of patterns otherwise diverse. These fret-patterns containing the swastika are, of course, among the most widely spread art-motives in the world; apart from their common use in Hellenic and Roman mosaics, forms almost identical with those at Bethlehem can be found at widely separated places and periods: on a Mycenaean sword of the sixteenth century B.C.;[1] as a fresco pattern at Thebes in ancient Egypt;[2] in medieval carving and embroidery;[3] and among the Saxon sculptures at Breedon on the Hill, published ten years ago by Mr. A. W. Clapham;[4] in this last case, some of the accompanying beasts and foliage have a distinct flavour of the ancient East.

The form of interlaced swastikas used in one of the nave patterns closely resembles that on some of the late classic coins of Crete,[5] and there seems a possibility that the pattern of the nave, with its suggestive resemblance to the marking-out of a fives court or football field, may have been a sacred labyrinth danced over by the choir. Such a practice still survives, or at any rate did so until recently, in the Mozarabic Mass of St. Isidore, used at Seville and Toledo, and it is said that the early bishops of the Church were called 'praesules' from their skill in leading the dance.[6]

Though the mosaics were by far the most spectacular finds, they were not of greater archaeological value than the remains of walls, steps and thresholds, which revealed the plan of the original church of Constantine (pl. XIV). These consisted of a series of steps leading up to the western façade, probably from the court of an atrium; of a western wall pierced by doors, of which the thresholds remain; of parts of the side walls of the nave, which occupied the same position as those of the present church, and of several portions of the external walls of the eastern extremity and octagon; the original nave with its side aisles formed an almost exact square.

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[1] Georg Karo, *Schachtgräber von Mykenä*, 1932, reproduced in Jörg Lechler, *Vom Hakenkreuz*, Leipzig, 1934, p. 41, n. 1.

[2] Wilson in *Annual Report*, Smithsonian Institution, Washington, 1896, reproduced in Lechler, *op. cit.*, p. 49, n. 6.

[3] Lechler, *op. cit.*, pp. 28–36.

[4] A. W. Clapham in *Archaeologia*, lxxvii (1927), p. 219, pls. XXXI, 2; XXXII, 1.

[5] W. H. Matthews, *Mazes and Labyrinths*, 1922, figs. 20–6.

[6] Scaliger, quoted in Article 'Dance', *Encyclopaedia Britannica*, 13th ed., vol. 7, p. 796. See also W. F. J. Knight, *Maze Symbolism and the Trojan Game*, in *Antiquity*, vi, 1932.

The courtyard of the presumed atrium was covered with white mosaic, with lines of coloured guilloche pattern outlining the paths leading towards the church doors; two steps led up from the court to the eastern walk, which was floored in white mosaic (pl. VIII, 2). The door thresholds were three steps higher than this atrium; that of the central entrance shows four bolt-holes, and countersinkings for the pivots of two great doors which opened inwards. The threshold was slightly rebated towards the interior, and was also one step above the floor of the nave (pl. IX, 1).

The threshold of the north aisle door was similar, but contained a second internal step, just above the mosaic level. This had in part been worn away by use, and filled in with a patch of white mosaic, similar to that of the adjacent work of the nave floor (pl. X, 1). The outer north aisle contained no door, but the foundations of the original west wall are still *in situ*.

Traversing the mosaics of the nave, which have already been described, the pilgrim reached a staircase of three steps leading to the higher level of the octagon, a level necessitated by the slope of the natural rock. The southern end of the lowest step had been worn down, like the threshold just mentioned, and had been repaired with white mosaic. The original staircase has been mutilated by intrusive work belonging to a later descending stair to the grotto, itself apparently of two periods, and closed at the present day (pl. X, 2).

It is possible that there may also have been access from the outer side aisles to small rooms, perhaps sacristies, at the north-west and south-west sides of the octagon—on the south, the mosaic of the aisle abuts against a low step of natural rock, and also against the foundations of the outer south wall, showing these to be of the original build. Further westward, it was found that this south wall of the early church was itself based on the rock; where external faces of the early foundations were exposed they clearly showed the effects of weathering on the rather soft limestone employed (pl. XI, 2). The north wall of the first nave, as was discovered by Père Vincent, extended eastwards across part of the present apse, but turned south to join the north face of the octagon. Parts of the foundations of the north-east and east walls of the octagon were also discovered, defining the eastern extremity of Constantine's church (pls. XIII and XIV).

The excavations also threw light on the early history of the existing church. Its nave colonnades rest on continuous stylobate walls which cut through the older mosaic floor and rest on the natural rock (pl. IX, 2). Setting-out lines marked in red on this stylobate could still be seen, marking the positions of the sub-bases below the columns.[1] A floor of grey marble, which still exists in the transepts,

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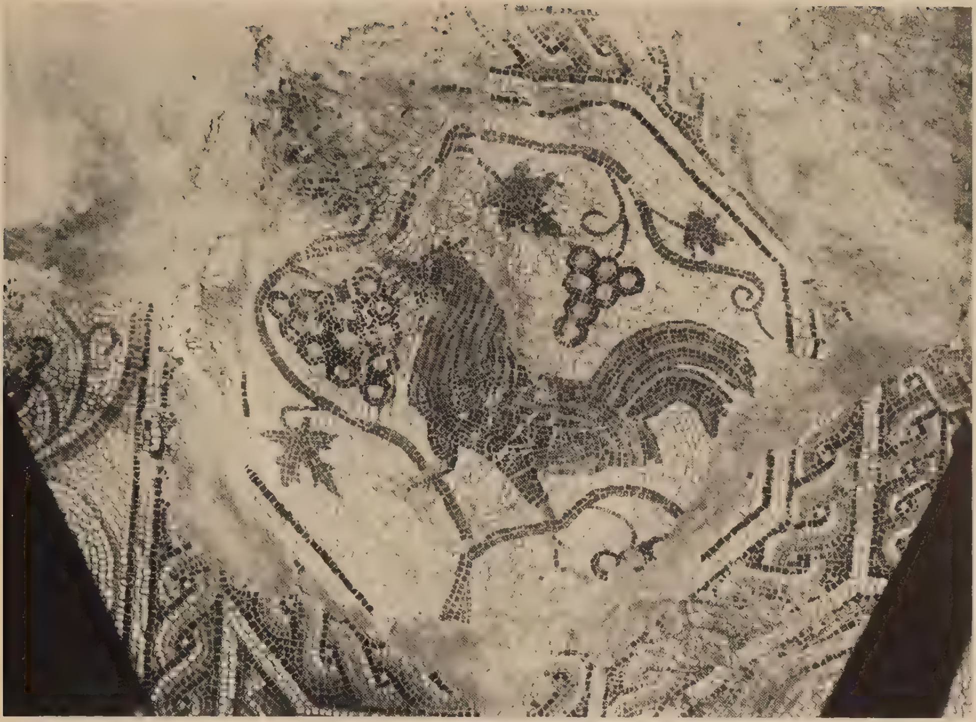
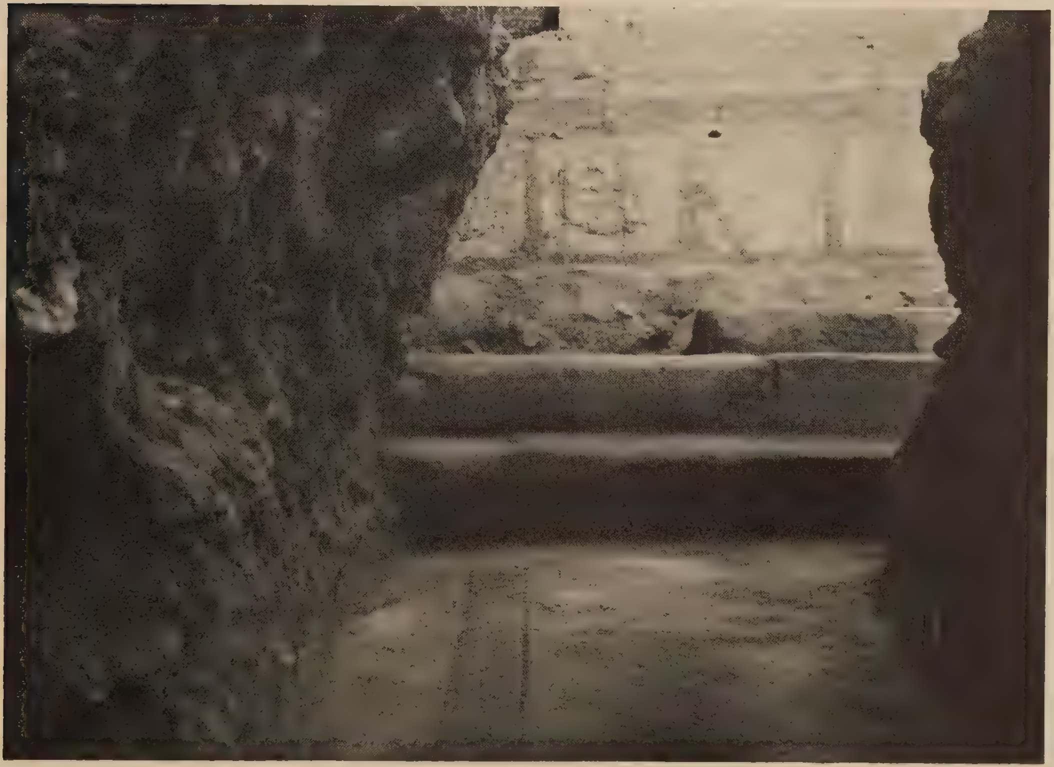
[1] E. T. Richmond in *Q.D.A.P.*, vi, pl. XIV, 3.



1. Mosaic panel with cock, after treatment



2. Mosaic and steps of the original atrium from the west

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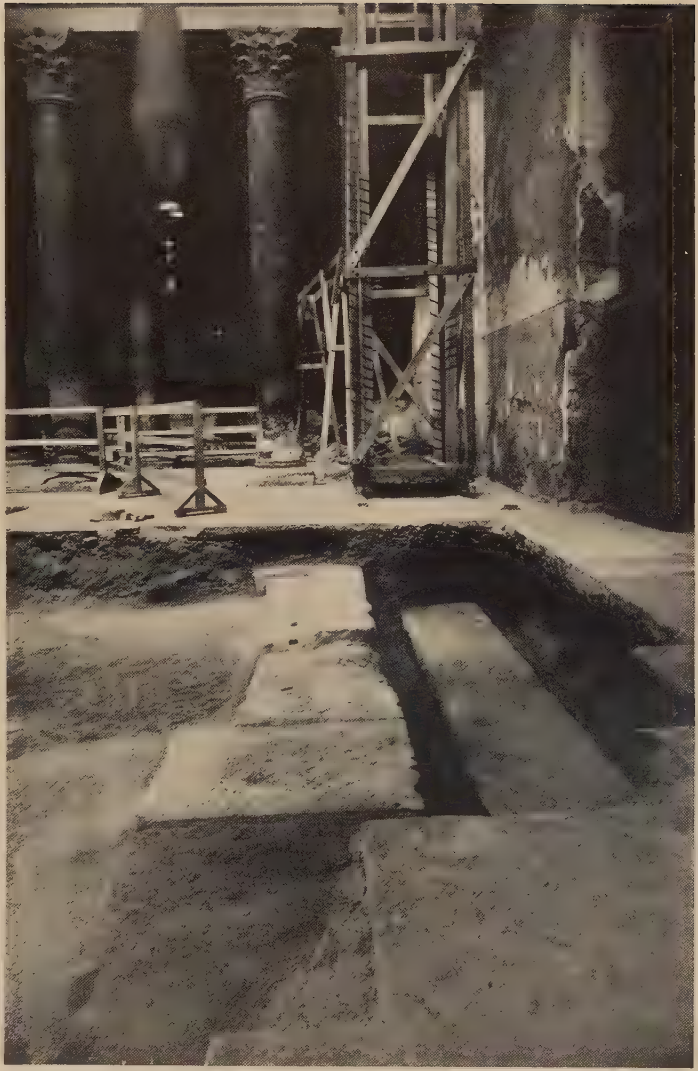
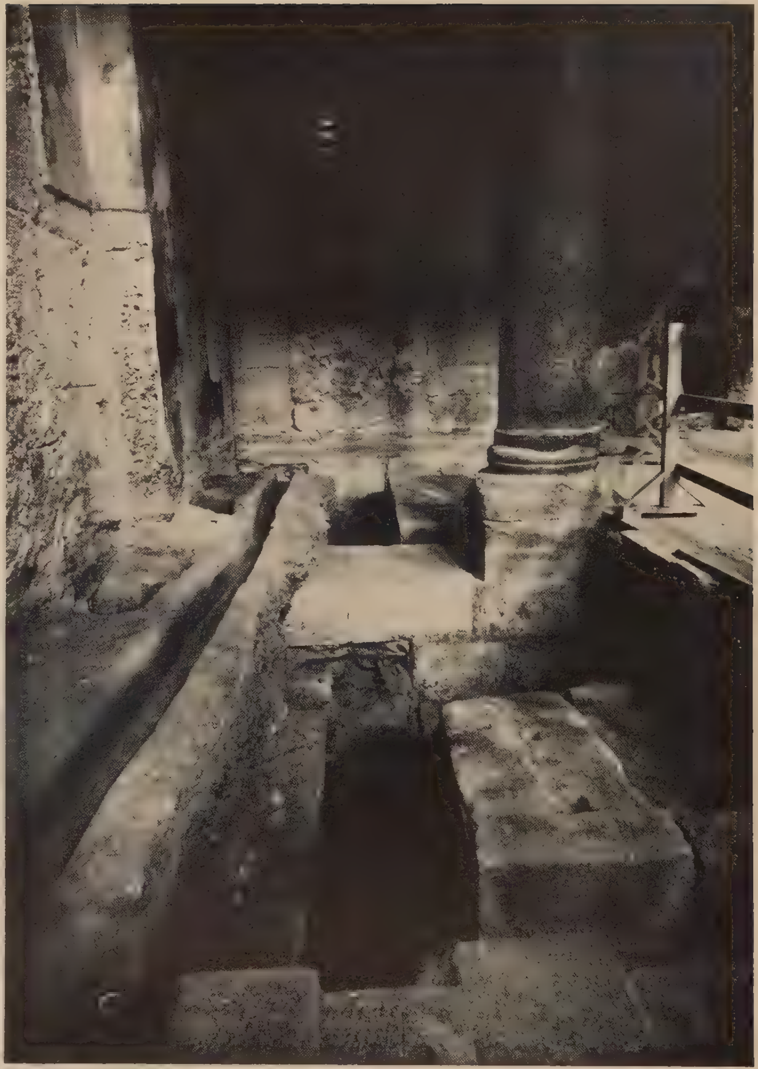


1. Threshold of central doorway of original nave from the north



2. A column of the present nave showing sub-base and stylobate wall

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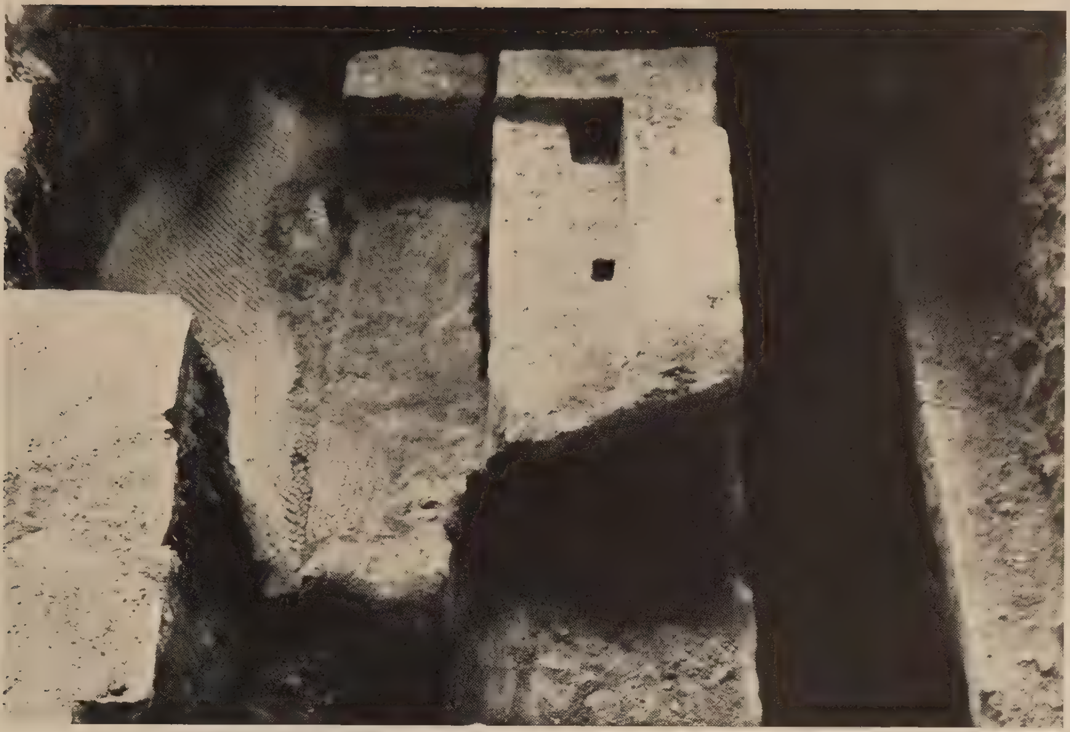
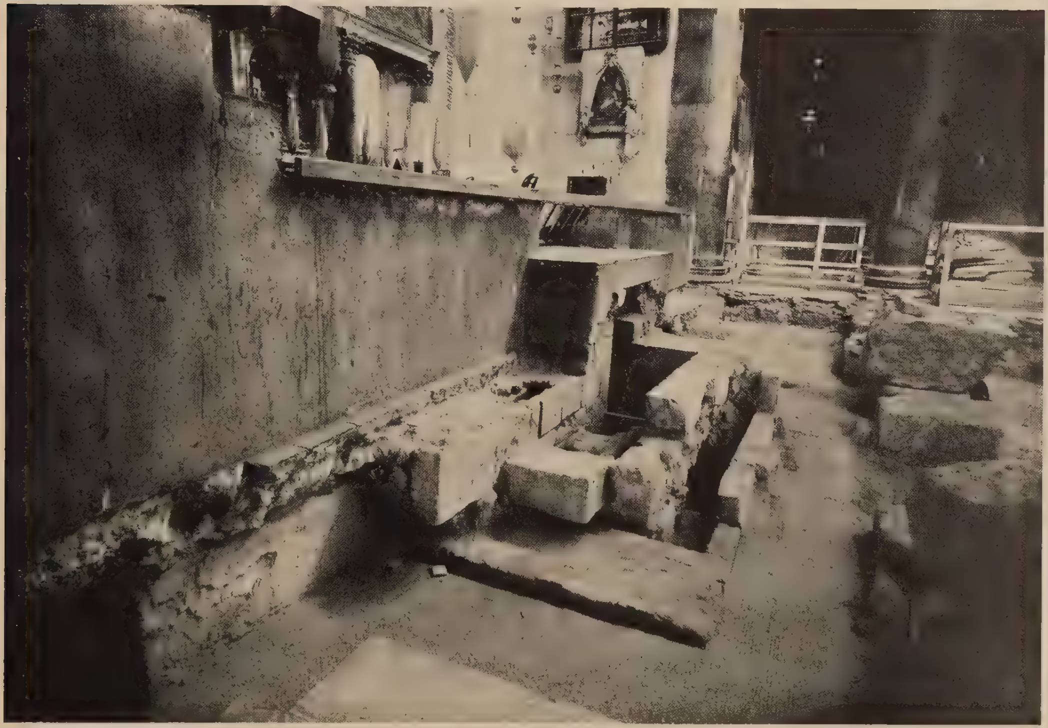


1. Threshold of north doorway of original nave aisle



2. Steps at east end of nave from the north

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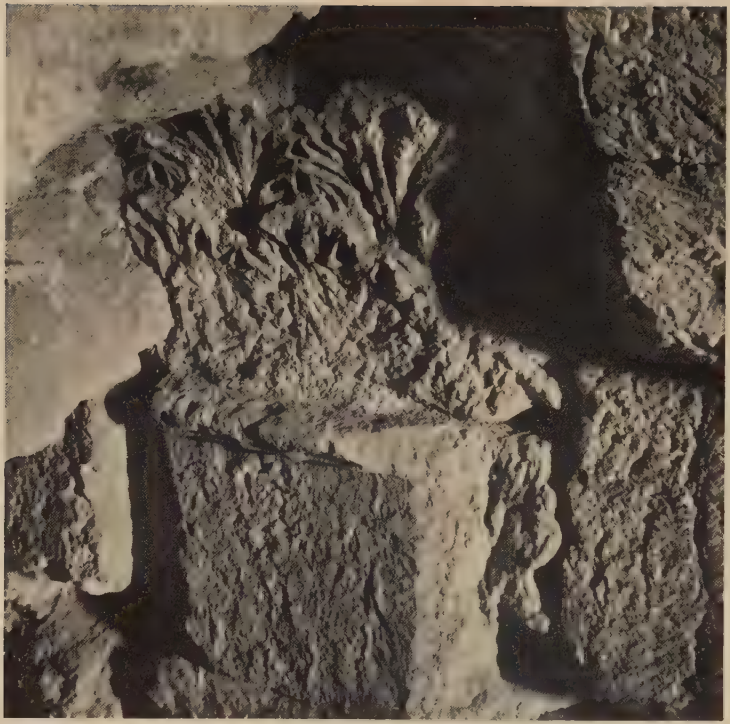
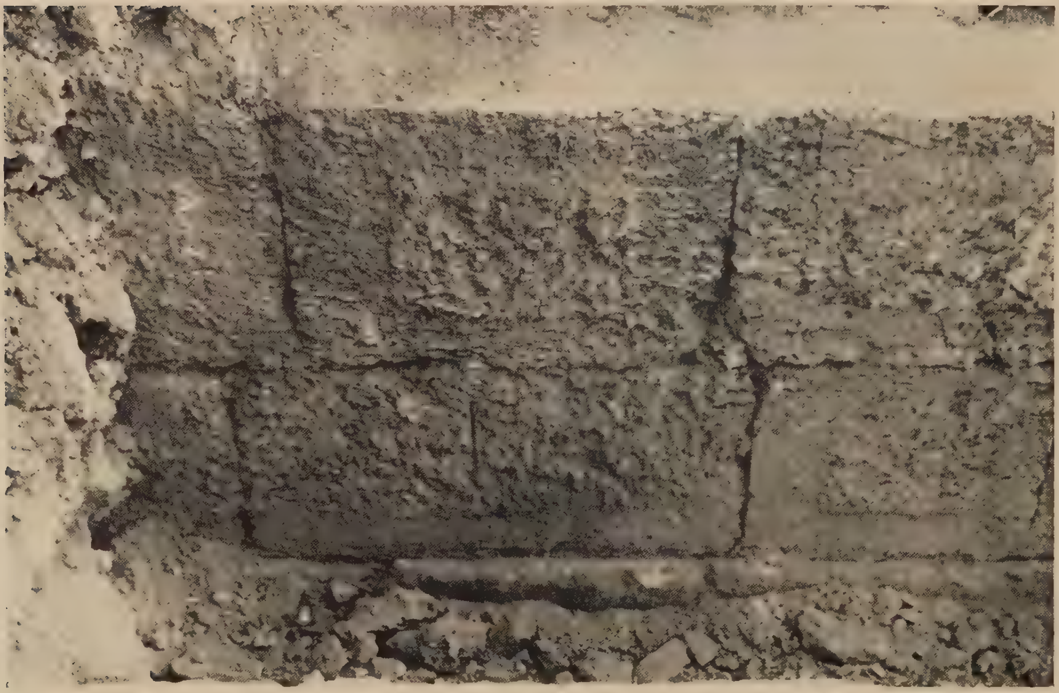


1. Capital of angle pier of Justinian's atrium



2. External face of original north wall of nave

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and of which fragments were found *in situ* in the nave, lay level with the top of these sub-bases, revealing the whole height of the polished red limestone bases, some two or three inches of which are now buried beneath the present stone paving.

With this exception, the structure of the nave exists to-day much as it did when built in the sixth century. Beneath the crossing and eastern arm, however, was a raised enclosure, probably surrounded by a bronze grille resting on a red limestone plinth, of which the eastern apsidal face was found *in situ* (pl. XV). The two bronze door-leaves which now close the two side entrances to the grotto certainly belonged together, and may well have been saved from the destruction of this screen. They at any rate agree with a sixth-century date.[1] East of this, the floor dropped back to the general level of the nave and transepts, while around the eastern apse were the usual raised benches, foundations of which were found still to exist.

To the north-east of the apsidal sanctuary a sunken channel was found, roughly circular in plan, and directly above, the now blocked opening of a great cistern cut in the rock; the inner face of this channel is approximately octagonal, and of suitable size to form a foundation for the font of red limestone now in the south aisle of the nave.[2] This may have served the dual purpose of well-head and font, as those receiving baptism could have knelt around the font on a marble grille covering the channel, while water drawn up from beneath was poured over them; there is a possibility that this was the well of Bethlehem from which David wished to drink, and therefore of special sanctity. This may account for the unusual position of the font inside the church itself.

A further discovery relating to the present structure was the finding of the south-east angle of its atrium and the head of the south door, hidden in part of the Armenian convent. The position of the atrium was already known, but it was feared that except for part of its foundations, discovered in 1932 by the Department of Antiquities, it had been destroyed. There were found *in situ* the angle pier with its capital, and the next column to the west, which had, however, lost its cap (pl. XI, 1).[3]

The style and workmanship of this atrium colonnade agree so closely with those of the great colonnades of the church, though on a slightly smaller scale, that it seems difficult to accept the hypothesis that the columns of the present church, with their bases and caps, date from the fourth-century building, and have been re-used. All attempts to justify this suggestion, as those of Père Vincent before and after,[1] and Mr. E. T. Richmond[2] after the recent excavations, end by placing the angle piers of the present crossing at the four corners of the original atrium. If this were the case, the atrium would have consisted of an order of the same scale as that within the church, in itself an improbability. There is also the fact that very careful examination of the double caps shows no sign of weathering, which would be expected if they had stood exposed to the courtyard for two centuries.[3] Part of the original atrium stylobate, found above the steps from the courtyard, is narrower than the bases of the present columns of the church—this also is against their having rested on it. Lastly, the historical evidence, and the fact that a layer of charcoal and ashes covered a considerable part of the nave mosaics, leave little doubt that the first church was sacked and burnt during the Samaritan revolt. It is hardly probable that so many of the original columns should have survived this conflagration and show no traces of it; there is, besides, the possibility that Constantine's church stood on masonry piers.

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[1] Roland Jäger in *Jahrb. d. deut. Arch. Instit.*, xlv, 1930, 91–115, quoted by L. H. Vincent in *Revue Biblique*, Jan. 1937.

[2] E. T. Richmond in *Q.D.A.P.*, vi, no. 2, pl. XVI, 2. For the font itself, W. Harvey and others, *op. cit.*, fig. 11 and pl. I; L. H. Vincent and F. M. Abel, *op. cit.*, p. 93, figs. 36 and 37.

[3] E. T. Richmond in *Q.D.A.P.*, vi, no. 2, pls. XIII, XIV. For the earlier excavations in the atrium, R. W. Hamilton in *Q.D.A.P.*, iii, no. 1.

One may add that among the finds in the soil used by Justinian's builders to raise the floor level for the new church, was a number of hard stones worn to a polished concave surface which exactly fits the existing columns. It seems probable, therefore, that these were polished on the site immediately before erection in the sixth century. A comparison between the existing capitals and those of Diocletian's palace at Spalato was used by Père Vincent to support a fourth-century date.[4] Though superficially alike, a closer comparison shows a large number of discrepancies, all of which are in favour of a much later date for those at Bethlehem, which besides greatly resemble work of the sixth century found in Syria.[5]

Among the smaller finds during the excavations, perhaps the most interesting were many large fragments of Roman roof tiles from the early structure; these consisted of flat tiles with raised edges, and separate cover-tiles of semicircular section, diminishing towards the upper end (fig. 2). A find of small clay lamps of early Byzantine type in the soil, used to raise the level of the nave floor, con-

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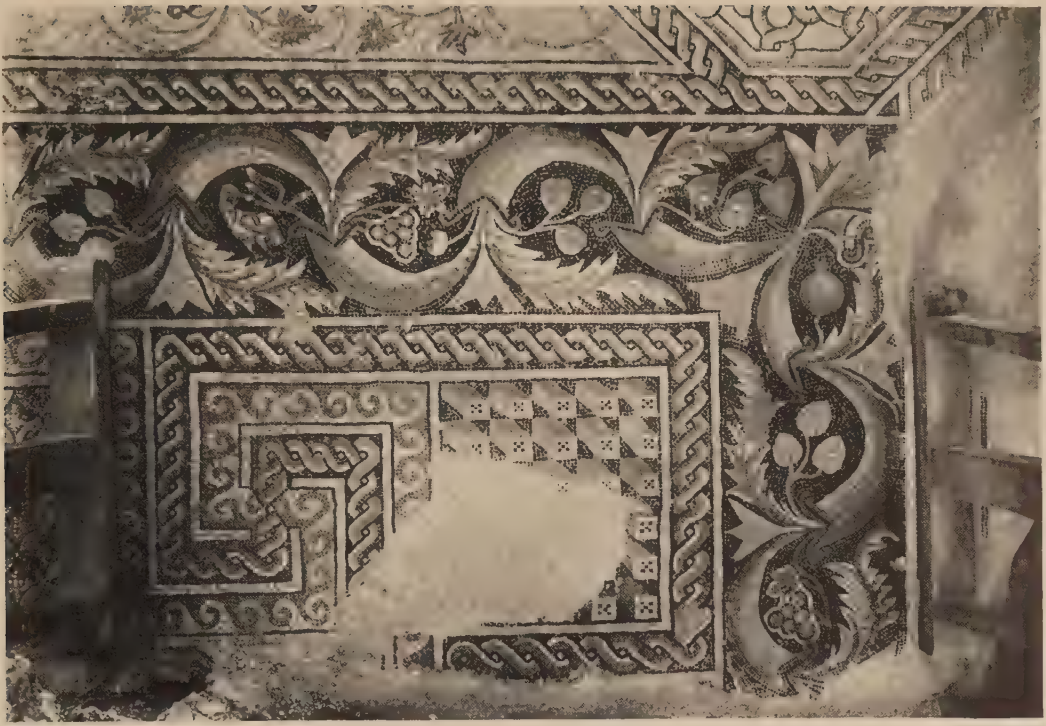
[1] L. H. Vincent and F. M. Abel, *op. cit.*, pp. 96-7, and pl. x; and L. H. Vincent in *Revue Biblique*, Oct. 1936.

[2] E. T. Richmond in *Q.D.A.P.*, vi, 64, and fig. 1.

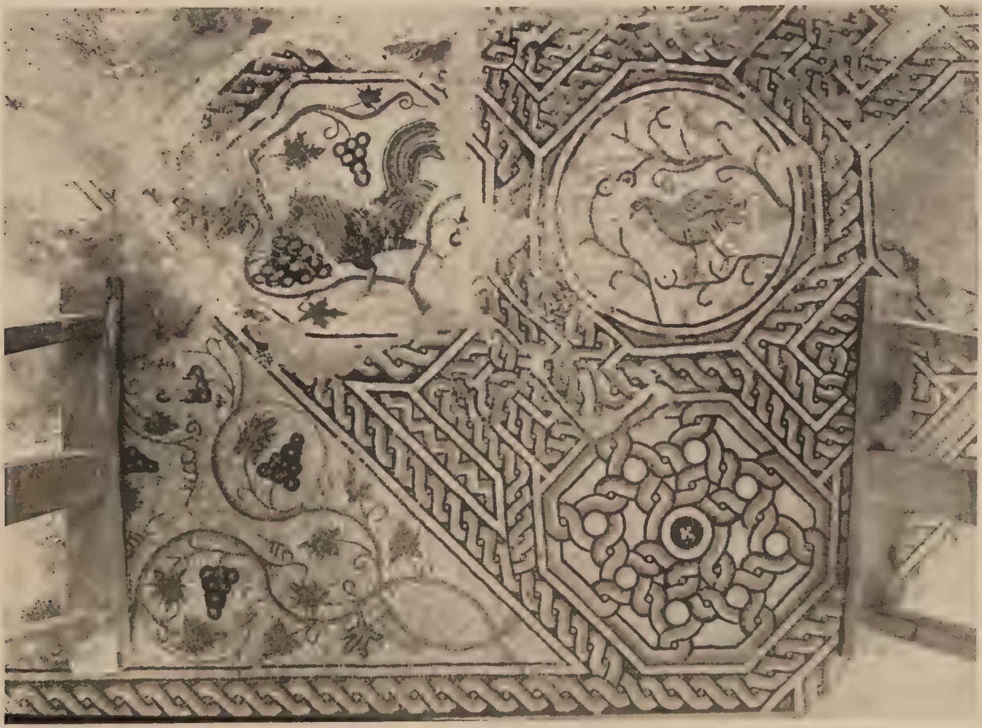
[3] For photographs of these capitals, see Vincent and Abel, *op. cit.*, pl. xiii, and W. Harvey and others, *op. cit.*, fig. 4.

[4] Vincent and Abel, *op. cit.*, p. 86, n. 1: '. . . à ce léger détail près, si l'on dessinait une croix sur le fleuron de ces chapiteaux on ne les discernerait plus sans une extrême attention des chapiteaux de Bethléem.'

[5] J. Ebersolt, *Monuments d'Architecture Byzantine*, 1934, esp. pl. xlv b. For a further discussion of the question of the columns and capitals, see W. and J. H. Harvey in *Journ. R.I.B.A.*, 6th December 1937, with one figure.



1. Part of sanctuary mosaic to show good repair: the four dice in lower right-hand corner



2. Another part of sanctuary mosaic to show careless repair of fret pattern below cock and partridge

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firmed the sixth-century date of the rebuilding. But no sealed deposits of coins or other definitely datable objects came to light which could be used as proof of any special theory of building dates. A large collection of potsherds and fragments of worked stone and marble from the excavations was preserved by the Department of Antiquities, but this threw no further light on the form of Constantine's structure.

As a considerable part of the church still remains unexcavated, it is possible that further evidence of an important character may be discovered, and it would be premature to attempt a definitive reconstruction of the whole building, though partial reconstructions have recently been attempted by Mr. E. T. Richmond and Père Vincent.[1] It has been suggested by Mr. J. W. Crowfoot that the early church is represented in the apse mosaic of St. Pudenziana in Rome, which shows an octagonal sanctuary surmounted by a truncated conical roof, and an aisled nave.[2] The only other probable identification of this mosaic would be with the Church of the Ascension, but although that contained an octagonal sanctuary, it seems that it was not directly connected with the basilica.

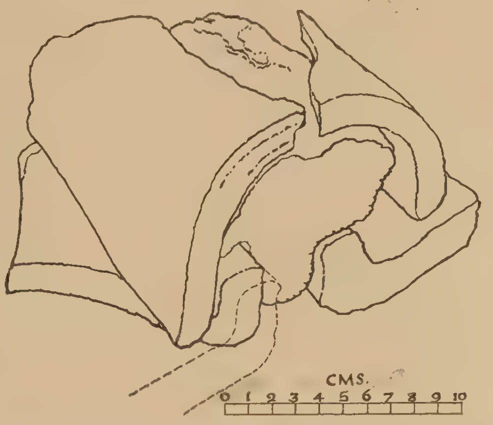

Fig. 2. Fragments of roof tiles from original church. Note shaped piece of mortar indicating relative position and fixing of tiles

It should here be mentioned that the three great shrines of Christianity share this plan-form of a concentric, circular, or octagonal sanctuary, and an attached or separated basilica. There seems much scope in the study of these very early church plans for the expert in early Church liturgy.

One minor mystery raised but not explained by the excavations, was the purpose of two curving walls across the north and south transepts. These were definitely of later date than the mosaic floor, as it had been cut through to give them a foundation on the rock, but they are also earlier than the walls of the present church. It is possible that they formed part of a tri-lobed eastern arm, begun by Justinian's architect, but never completed, as Père Vincent suggests in his recent study of the whole problem in the *Revue Biblique* (pl. XIII).[3] Another hypothesis, admittedly tentative, has been put forward by Mr. Ernest H. Swift.[4] This is to the effect that the plan with three large lobes was actually carried out, and had become so ruinous by the twelfth century that the Crusaders rebuilt the whole eastern arm in its present form. In view of structural evidence too extensive to be discussed here,[1] this theory is untenable, and it must be remembered that it was formed on the meagre summary of the excavations which was added to an official report written to serve a different purpose.

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[1] E. T. Richmond in *Q.D.A.P.*, vi, no. 2; L. H. Vincent in *Revue Biblique*, 1936–7.

[2] For a good reproduction, see M. van Berchem and Clouzot, *Mosaïques Chrétiennes*, p. 65.

[3] L. H. Vincent in *Revue Biblique*, January 1937, p. 111, fig. 16.

[4] E. H. Swift in *American Journal of Archaeology*, vol. 40 (1936), pp. 397–402.

One further point deserves attention: do the floor mosaics date from the middle of the fourth century, or are they a reconstruction of perhaps a hundred years later? Père Vincent gives his judgement in favour of a very late fourth- or early fifth-century date, after a searching scrutiny of the motives and artistic effect of the mosaics.[2] But his principal argument is an archaeological one, based on the facts of the excavation. In his view, the repairs to the worn treads of two steps, already mentioned, were executed at the same time as the laying of the mosaic itself; in other words, the steps had suffered from the wear and tear of two or more generations before the existing floor was put down.

However reluctant to disagree with Père Vincent's verdict on the artistic aspect of the mosaics, we must remark that careful examination of these two repairs convinced us that the opposite was the case: namely, that the mends were later in date than the surrounding mosaic to which they were skilfully joined, and that the floor itself, like the steps, had therefore been in existence for an extended period (pl. x, 1).[3]

The existence of the ΙΧΘΥϹ inscription is probably the strongest piece of evidence for a Constantinian date. The monogram was regarded as a sacred symbol, and as time went on there was a growing opinion in the Church that these should not be placed on floors, where they could be trodden on. This feeling was already strong in the late fourth century, and found legal expression in A.D. 427, when the Codex of Theodosius and Valentinianus absolutely prohibited the use of the cross in pavements.[4] The question is a difficult one, as the mosaics themselves exhibit such great stylistic differences. It may, however, be stated that no direct evidence for the existence of an earlier mosaic was found, while the worn state of the existing portions suggests a long period of use. Repairs in several places had been made, probably at two different periods, since some were executed with great care, others with a lack of attention even

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[1] The chief points are: the construction of the colonnades, with timber architraves and hidden relieving arches, is exactly the same both in nave and transept, and so far as the western walls of the transept are concerned, proves them to be of the same build as the nave; the quite definitely Crusader screen walls at the entrances to the grotto are intrusive, and not accurately centred on the columns and semicircular stairs, which are of a very different material and workmanship; the existing transept and eastern arm bear no resemblance either in style or masonry to undoubted Crusader work.

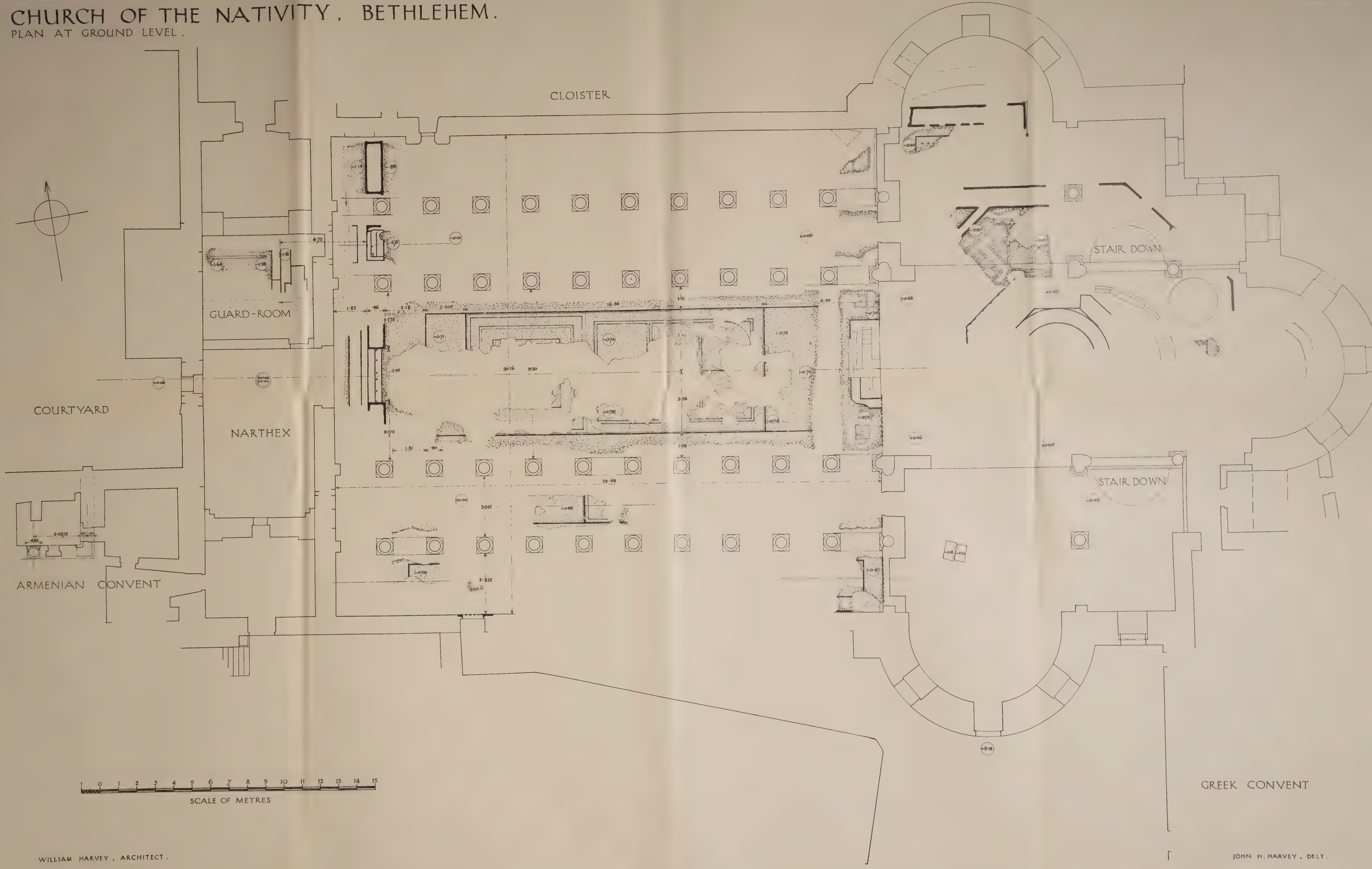
[2] L. H. Vincent in *Revue Biblique*, January 1937.

[3] See also E. T. Richmond in *Q.D.A.P.*, v, no. 3, pl. xl, 1, 2.

[4] M. Avi-Yonah in *Q.D.A.P.*, iii, 63.

CHURCH OF THE NATIVITY, BETHLEHEM.

PLAN AT GROUND LEVEL.


CLOISTER
GUARD-ROOM
STAIR DOWN
COURTYARD
NARTHEX
STAIR DOWN
ARMENIAN CONVENT
GREEK CONVENT
1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
SCALE OF METRES

WILLIAM HARVEY, ARCHITECT.

JOHN H. HARVEY, DELT.

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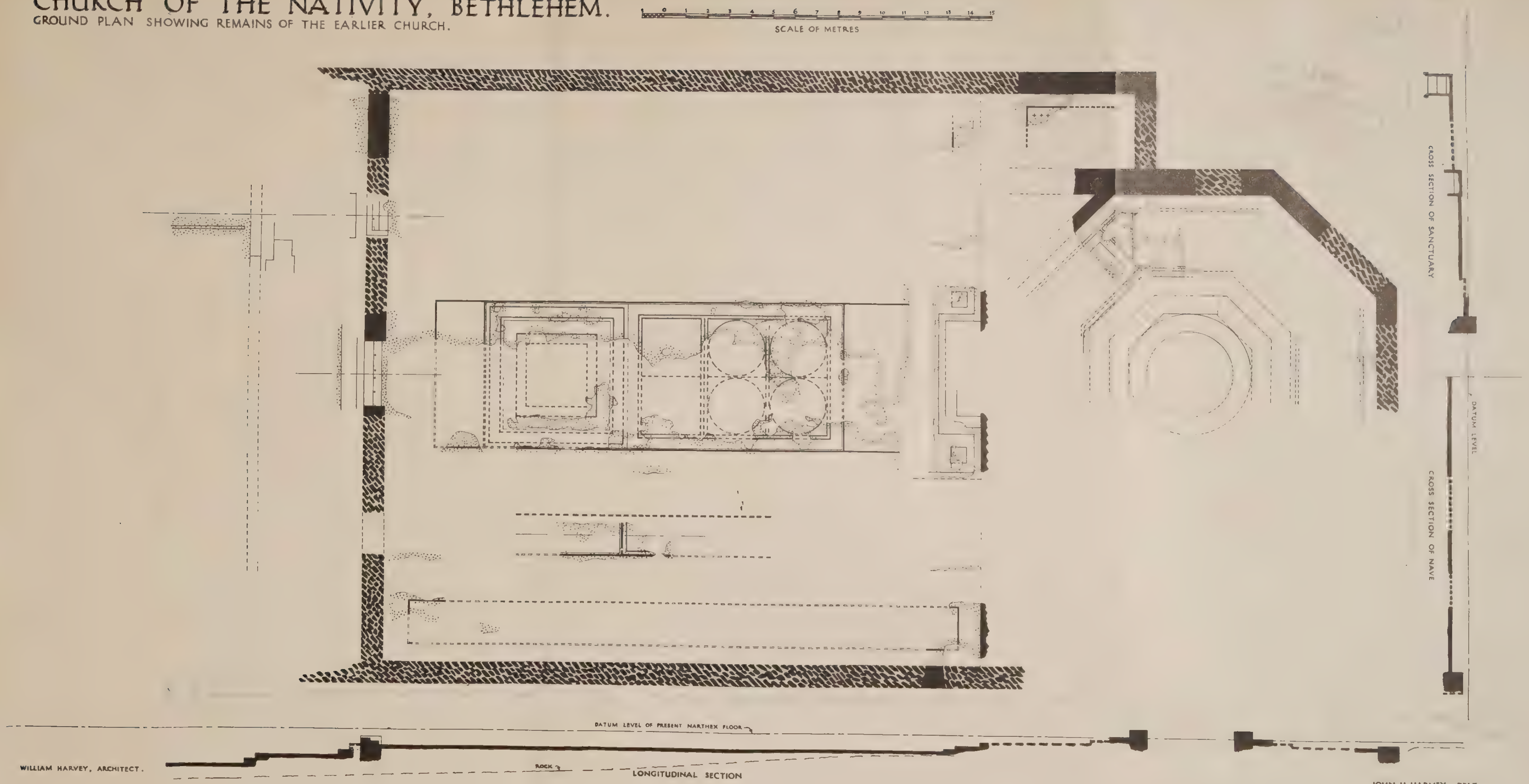
CHURCH OF THE NATIVITY, BETHLEHEM.

GROUND PLAN SHOWING REMAINS OF THE EARLIER CHURCH.


1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
SCALE OF METRES
CROSS SECTION OF SANCTUARY
DATUM LEVEL
CROSS SECTION OF NAVE
DATUM LEVEL OF PRESENT NARTHEX FLOOR
ROCK
LONGITUDINAL SECTION

WILLIAM HARVEY, ARCHITECT.

JOHN H. HARVEY. DELT.

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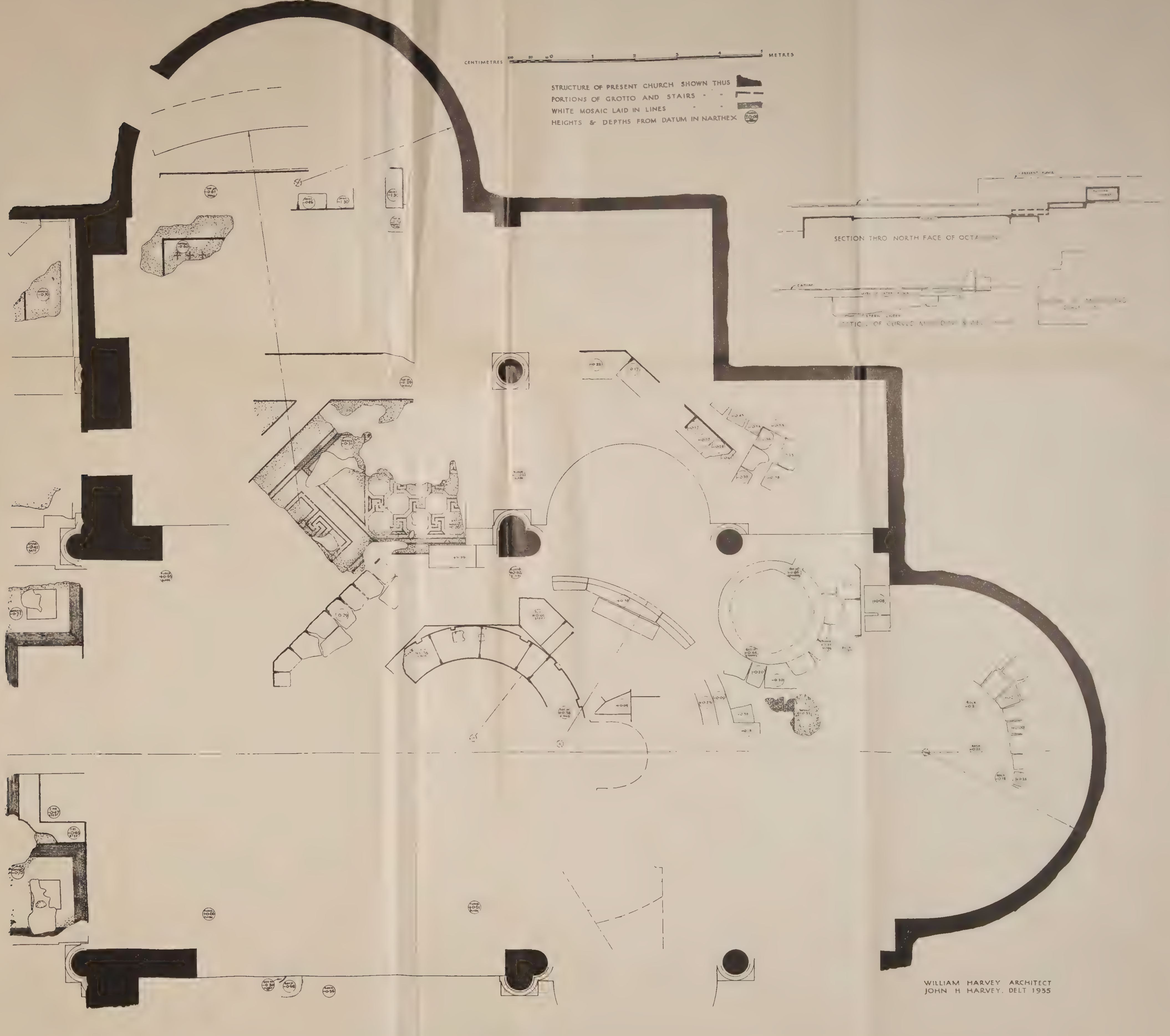
CHURCH OF THE NATIVITY, BETHLEHEM.

PLAN OF EXCAVATIONS IN CENTRAL PART.


CENTIMETRES 100 50 0 1 2 3 4 5 METRES
STRUCTURE OF PRESENT CHURCH SHOWN THUS
PORTIONS OF GROTTO AND STAIRS
WHITE MOSAIC LAID IN LINES
HEIGHTS & DEPTHS FROM DATUM IN NARTHEX
SECTION THRO NORTH FACE OF OCTA
PRESENT FLOOR
DATUM

WILLIAM HARVEY ARCHITECT
JOHN H HARVEY. DELT 1935

Published by the Society of Antiquaries of London, 1938

to the main lines of the pattern, suggesting both poverty and the poor craftsmanship to be obtained in the period of political disturbance at the end of the fifth century (pl. XII, 1 and 2).

When we add that it may have taken a considerable period to lay so large an expanse of flooring, there seems to remain a strong probability that in these mosaics we see all that is left of the 'magnificent honours and imperial offerings'[1] given by the Emperor Constantine and his mother to adorn the humble cave which saw the Nativity of Jesus.[2]

The photographs, pls. VI, VII, VIII (1), IX (2), X (2), XI (1), and XII (1, 2) are by Mr. C. Raad of Jerusalem; the remainder are by J. H. Harvey. All the photographs except pls. V (1), VII, VIII (1), and XII (1, 2), are from negatives specially taken for the Structural Survey Report and are reproduced by kind permission of the Crown Agents for the Colonies and the Oxford University Press.

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[1] Eusebius's *Life of Constantine*, bk. iii, c. 41, 43, quoted by H. A. A. Cruso in W. Harvey and others, *op. cit.*, p. 53.

[2] The illustrations to the articles by E. T. Richmond in *Q.D.A.P.*, v, no. 3, and vi, no. 2, and by L. H. Vincent in *Revue Biblique*, 1936–7 (vol. 45, pp. 544–74; vol. 46, pp. 93–121), should be studied; also those in William Harvey, *Structural Survey of the Church of the Nativity*, 1935. An interesting diary of the discovery of the mosaics, with six figures, was published by the Right Rev. Archbishop of Jordan in *Νέα Σιών*, 1934, pp. 388–405.

III.—*Medieval finds at Al Mina in North Syria*

By Arthur Lane, *Esq.*

Reports on the excavations at Al Mina during the two seasons 1936 and 1937 have already appeared in the *Antiquaries Journal*,[1] and Sir Leonard Woolley has now invited me to give a more detailed account of the finds dating from the medieval period. The Board of Education granted me special leave from my duties at the Victoria and Albert Museum, and I was thus able to assist at the excavations during the whole of the 1937 campaign.

It will be recalled that the inhabitants of the town on Tal Sheikh Yusuf, identified by Sir Leonard Woolley with the ancient Posidium, were evidently transferred to the new city of Seleucia Pieria which Seleucus Nicator founded about 300 B.C. For about eight centuries after that date the site at the mouth of the Orontes was practically uninhabited; the whole of the Seleucid and Roman period is represented only by a dozen coins ranging from Commodus to Honorius.[2] The great artificial harbour of Seleucia, three miles to the north, held a monopoly of the import and export trade; its communication with Antioch, twelve miles inland, must have followed much the same course as the modern road over the intervening foot-hills. Under Augustus or Tiberius the bed of the Orontes was artificially deepened to allow ships of some size to sail up as far as the capital,[3] and by the second half of the fourth century A.D. it is possible that a small shipping station had again come into existence at the mouth of the river itself. Thus, Libanius implies that Antioch in his day possessed more than one harbour, distant a hundred and twenty stades from the city,[4] and John Malalas (491–578) mentions a natural harbour called

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[1] *Antiq. Journ.*, xvii, 1937, 1–15, 'Excavations near Antioch in 1936'; also *Journ. Hellenic Studies*, lviii, 1938, 1–30, 'Excavations at Al Mina, Sueidia', by Sir Leonard Woolley.

[2] The coins found in the 1936 campaign have been described in the *Num. Chron.*, Fifth Series, xvii, 1937, by E. S. G. Robinson, 'Coins from the excavations at Al Mina; with an appendix on the coins of Posidium', and by D. Allen, 'Coins of Antioch, etc., from Al Mina'.

[3] Pausanias, viii, 29, 3; Strabo, xvi, 2, 7, p. 651 c. The river was evidently still navigable in A.D. 369–70; see note 2, p. 212 of Chapot's article mentioned below. In the middle ages it was no longer so; Mukaddasi (*c.* 985) says, 'Neither the Barada, the River Jordan, the River Maklub (Upper Orontes), nor the River of Antioch (Lower Orontes) are navigable for boats' (trans. Le Strange, *Palestine Pilgrims Text Soc.*, 1892, 82).

[4] Libanius, *Or. XI* (*Antiochicus*), xli, 286, ed. Reiske: *τοσοῦτον γὰρ διέχομεν λιμένων ὅσον ἡμᾶς καθαρούς τε τηρεῖ θαλαττίων κακῶν καὶ μετόχους ποιεῖ τῶν ἐκ θαλάττης καλῶν. σταδίοι γὰρ τὸ μέσον εἴκοσι καὶ ἑκατὸν* . . . Quoted by Chapot in his most valuable article 'Séleucie de Piérie' (*Mémoires de la Société Nationale des Antiquaires de France*, vi, 1907, 149).

Bytyllion near Seleucia.[1] The excavations brought to light the remains of an early Byzantine settlement at the southern edge of Tal Sheikh Yusuf,[2] and it is plausible to identify this with the northern outskirts of Bytyllion; most of the buildings and other remains would, of course, have been carried away by the river when this changed its course some hundred and fifty years ago.[3] Antioch and Seleucia were ruined in the great earthquake of A.D. 526, and their recovery discouraged by further shocks in 528, 581, and 588; the harbour at Seleucia gradually silted up, and declining trade probably made more use of the small port at the river-mouth. The Sassanian invasions of north Syria under Khusrau Nushirvan in A.D. 540 and Khusrau Purviz in 611 were ominous preludes to the Arab conquest of 638, after which Antioch, once the greatest city of Syria, sank to the level of a provincial dependency of Damascus. To judge from the absence of material which could be dated in the seventh and eighth centuries, the port at the river-mouth (Bytyllion ?) now ceased to exist.[4]

The Ommeyad dynasty of Damascus gave place to the Abbasid, and the capital was moved eastward into Mesopotamia. The court resided first at Kufa, then at Baghdad (founded in A.D. 762); then in 836 the Caliph Mutasim built himself a new city at Samarra further up the Tigris. Commerce now developed on a scale comparable to that of Roman times, with silk and porcelain coming in from the Far East, and the newly invented lustre-ware going out from the court workshops to Samarkand, Egypt, and Spain. Geographical factors brought a fair share of this prosperity to the doors of Antioch. Between Mesopotamia and the countries along the Mediterranean coast lay the Syrian desert, barring the direct route from Baghdad to Damascus. When the Parthians traded with Rome, the caravans started from Dura on the Euphrates certain of finding shelter at Palmyra, the prosperous city that guarded the oasis half-way to Damascus; but Dura was destroyed by the Sassanians under Shapur about A.D. 256, and Palmyra, grown over-proud under Vaballath and his widow Zenobia, barely survived its chastisement at the hands of Aurelian later in the century.[5] The desert-road to the west fell out of use, and the traders were forced to take a longer route to the north along the 'fertile crescent'. Following the Euphrates as far as Rakka or Balis (the 'Port of the Syrians' referred to by Istakhri) they then struck westwards to Aleppo.[1] From here they could go overland to Homs (Emesa) and Damascus, but to reach the coastal towns and Egypt it would be more convenient to do part of the journey by sea. The two ports nearest to Aleppo were Latakia (Laodicea) and the more easily accessible one at the mouth of the river Orontes, reached via the Amuk plain and Antioch. Once again Tal Sheikh Yusuf became the site of a busy seaport. The excavations brought to light a great quantity of glazed and unglazed pottery covering an area comparable in extent to that of the earlier Greek and of the later Crusaders' settlements; some of this must have been made close at hand for short-distance trade down the coast, but other types, including lustre-ware, were so like those found at Samarra as to leave no doubt that they were brought all the way from Mesopotamia. This occupation apparently began during the Samarra period (A.D. 836–83)—we may tentatively suggest the middle of the ninth century; but some of the lustre-ware is painted in a style which only developed after Samarra was abandoned, so that trade evidently continued till well into the tenth century. In 878 Ahmed Ibn Tulun, the governor of Egypt, repudiated the Caliph's authority and invaded Syria; Antioch resisted and was taken by storm.[2] The Tulunids maintained a precarious hold over the country till their fall in 904, when the rule of the Baghdad government was re-established. But the Abbasid power was now in full decline; the Caliphs were at the mercy of their Turkish bodyguard, and the local chieftains constantly at war together. About 944 northern Syria came under the control of the Hamdanid emirs of Aleppo and Mosul, whose rule proved so unpopular at Antioch that the people revolted; the rebel leader Rashik even made overtures to the eastern emperor before his defeat and death in 966. It was a period of political strife, but commerce evidently did not suffer; Istakhri, who visited Antioch in 951, found that city prosperous.[3] He omits to mention its harbour, whose name in early Arab times remains uncertain; the modern title Suwaidiya hardly appears before the Crusading period (see E. Honigmann in the *Encyclopaedia of Islam*, under *Suwaidiya*).

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[1] Quoted by Chapot, *loc. cit.*; Malalas (p. 270, Bonn): . . . *εἰς δρόμωνα ἀπὸ τοῦ λεγομένου Βυτυλλίου ὁρμιστηρίου, ὄντος αὐτοφυοῦς λιμένος πλησίον Σελευκείας τῆς Συρίας.*

[2] Architectural evidence mentioned on p. 24, below; pottery, p. 27; glass, p. 62; other objects, p. 74; coins of Justin, Justinian, and Heraclius, *Num. Chron.*, xvii, 1937, 194.

[3] *Antiq. Journ.*, xvii, 4.

[4] The most convenient summary of events at Antioch during this period will be found in E. S. Bouchier's *Short History of Antioch*, 1921, 179 212; V. Schultze's *Antiocheiae* (*Altchristliche Städte und Landschaften*, iii, 1930) is less helpful. There is probably useful material in Henri Lammens's *Promenades dans l'Amanus* (quoted by R. Dussaud in his *Topographie de la Syrie*, 1927, 419, n. 7, 427, n. 4), but I have been unable to procure this work. It is not in the catalogue of the Bibliothèque Nationale, and if it appeared as an article in some periodical, Dussaud gives no clue for tracing it.

[5] M. Rostovtzeff, *Caravan Cities*, 1932, 91–119.

By the tenth century Islam had ceased to be a menace to the eastern empire, and the initiative of hostilities passed into the hands of the Christians. Nicephorus Phocas in 968 led a victorious army through Syria, and early in the following year Antioch fell to his general Michael Bourtzes.[1] From that date till its betrayal to the Seljuk emir of Isnik in 1081 it remained part of the empire. The trade passing through the port at Al Mina sensibly diminished; eighteen coins were found on the site, ranging from Michael IV to Nikephorus III, but no other objects could with certainty be dated in this period. A significant point is the complete absence of the Fatimid lustre-ware now being made in Egypt: if the excavated area had been in occupation at the time, this would surely have been among the finds, for it was exported as far afield as Italy.[2] We may therefore conclude that the stratum of early Arab pottery was laid down before the Fatimid kilns became active, and the known fact of the Byzantine invasion of 968–9 suggests this date, quite precisely, as the *terminus post quem nihil* for the whole group of finds in question. Al Mina probably continued its existence in a shrunken form as a naval station, but only a few of the buildings would be tenanted along the edge of the river; these have disappeared owing to erosion.

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[1] On the question of trade-routes, see R. Dussaud, *Topographie de la Syrie*, 1927, map XIV; W. Heyd, *Histoire du commerce du Levant au moyen âge*, 1885, i, 42–4; E. Rey, *Les Colonies franques de Syrie au 12me et 13me siècles*, 1883, 196 ff.

[2] Stanley Lane-Poole, *A History of Egypt in the Middle Ages*, 1901, 66–76.

[3] *Das Buch der Länder von Szech Ebn Ishak el Farsi el Isztachri*, trans. A. D. Mordtmann, Hamburg, 1845, 37, 44 (map v).

After a brief interlude of Seljuk rule (1081–98) Antioch became the earliest objective of the First Crusade. The famous siege began in October 1097, but the city was not finally secured for Latin rule until the repulse of the Turkish relieving force in June of the next year.[3] Meanwhile, in November 1097, the town at the mouth of the Orontes had been captured by a Genoese fleet,[4] who rendered invaluable help to the besiegers by supplying them with food. In return, the Genoese were granted special quarters in Antioch and Suwaidiya by Bohemund, the first prince of Antioch, privileges confirmed by his successors.[5] The Italian merchant fleets were always ready to fight on behalf of the Latin princes; thus in 1110 King Baldwin sent from Beirut to Suwaidiya for help, and forty Genoese vessels laden with fighting men set sail in response,[6] while the Pisans earned the gratitude of the prince of Antioch for their activities against the Byzantine forces who had occupied Latakia.[7]

Throughout the Latin occupation Italian ships plied a lively trade between the Syrian coasts and Europe, to the advantage not only of themselves but of the settlers: with the enemy constantly threatening the cultivated lands, sea-communication became of vital importance both as a source of supplies and a line of retreat.

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[1] E. S. Bouchier, *A Short History of Antioch*, 213 ff.

[2] See G. Ballardini, 'Note sui "bacini" romanici e in particolare su alcuni "bacini" orientali in San Sisto di Pisa' (*Faenza*, xvii, 1929, 113 ff.).

[3] Bouchier, *op. cit.*, 234 ff.; W. B. Stevenson, *The Crusaders in the East*, 1907, 25 ff.

[4] W. Heyd, *Histoire du commerce du Levant au moyen âge*, 1885, i, 133. He quotes the claim made for unaided conquest in the Genoese records.

[5] *Regesta Regni Hierosolymitani*, 1097–1291, ed. Röhricht, 1893, p. 5, 1101; pp. 29–30, 1127; also in 1169, 1178, etc.; Heyd, *op. cit.*, i, 133, 156.

[6] *The Damascus Chronicle*, ed. Gibb, 1932, 100.

[7] *Regesta Regni Hierosolymitani*, 1108, 1154.

For a hundred and seventy years Antioch remained to the Latins as the one constant factor of their uneasy occupation, and when at last it fell to the Mameluke Sultan Baibars in 1268 the hopes of Christianity in the east were doomed. Saladin had threatened it, and captured in 1188 its second port of Latakia; thereafter the harbour at the mouth of the Orontes became more important than ever.[1] The buildings must have spread rapidly in the only direction that permitted expansion—to the north, away from the river. This was the part of the town that we excavated, and the evidence of coins suggests that it hardly came into existence before the end of the twelfth century. The place appears in the works of contemporary historians under a bewildering variety of names: Arab writers continue to call it Suwaidiya, and many Christian sources reveal corrupt versions of the same form.[2] But the Western historians of the Crusades habitually use for it the new name Portus Sancti Symeonis, Port St. Symeon, after the sixth-century stylite Symeon the Younger, whose monastery crowns one of the neighbouring hills. No contemporary account gives a clear picture of the place, but Wilbrand of Oldenburg, *c.* 1211, mentions the 'portum sinuosum Antiochiae', and a malodorous cavern where the blessed Peter (the Hermit?) destroyed a dragon.[3] In his time the Orontes was not navigable as far as Antioch; Yaqut (d. 1229) speaks of the baggage animals that journeyed between the two places: 'Between Antioch and the sea there is an anchorage in a township which is called Suwaidiya. There the European ships anchor, and from there they carry their wares on beasts of burden to Antioch.'[4]

We do not know whether the inhabitants lived on Tal Sheikh Yusuf alone or also at the place a mile inland, where the modern village spreads over a small hill. The great majority of the coins date from the first half of the thirteenth century, and the style of the local pottery is so uniform as to suggest that it covers a similarly short period; here again it looks as if the excavations brought to light only that part of the town which had grown on the side farthest from the river. Most of the twelfth-century material must have been swept away when the river removed the southern part of the *tell*.

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[1] Heyd, *op. cit.*, i, 324.

[2] Alternatives are given by Heyd, *op. cit.*, i, 169: *Sevodi*, Matthew of Edessa, trans. Dulaurier, *Bibliothèque arménienne*, 169; *Sedium*, Raoul de Caen in *Recueil des historiens occidentaux des croisades*, iii, 151; *Suidin* or *Sudinum* in Venetian or Genoese charts; *Soldyn*, *Soldinum* in Marco Sanuto, *Secreta fidelium crucis*, 174, 244; *Sollinum*, *Sulinum* in Ughelli, *Ital. Sacr.*, iv, 287, the Genoese records, and Caffaro, *Annales*, 14; *Solim* in Theodoricus, *De locis sanctis*, ed. Tobler, 108, etc.; *Σουδὶ*, *Σουδεὶ*, *Σουέτιον* in Anna Comnena, ii, 87, 126, 239, ed. Bonn; *Souediyeh* in Edrisi, ii, 136, trans. Jaubert, and in Yaqut, *Yacuts Geographisches Wörterbuch*, ed. Wüstenfeld, 1869, i, 385. The transliteration of the Arabic form by scholars itself adopts as many spellings as phonetics allow.

[3] Ed. Laurent, *Peregrinatores medii aevi quattuor*, 1864, 171.

[4] *Yacuts Geographisches Wörterbuch*, ed. Wüstenfeld, 1869, i, 385.

After 1268 the site reverted to agriculture. Not a fragment of Mameluke pottery was found, and only one or two later coins;[1] four isolated sherds of Italian pottery dated from the sixteenth century, and a number of broken glazed bowls, Turkish in style, might have been dropped by the local farmer at any time during the last two hundred years. To-day the harbour, with its single go-down, serves a fairly thriving import trade in wood and cement, but there are only a bare half-dozen houses at the landing-place a little lower down the river from the *tell*. It was only when political or other conditions gave some extraordinary stimulus to trade that the place had expanded beyond these narrow limits—once in the ninth to tenth century, and once again under the Crusaders in the thirteenth.

THE SITE (fig. 1)

The following description of the site and its medieval levels was written by Sir Leonard Woolley, who has allowed me to include it here; the text is unchanged except for the omission of statements that have been incorporated elsewhere in this article.

Over the whole of the north and west part of the site the medieval level was either denuded away entirely by the action of weather and the plough, or was represented only by a few meaningless tatters of walls and by scattered graves. On the NE. side, above the scarp, there was nothing of it left at the north end, but as our work advanced to the SE. it was found that whereas the present height of the *tell* continued to be much the same, the floor level of the medieval period went down lower and lower, its buildings being gently terraced down the sloping side of the older mound; in proportion as the greater depth of overlying soil better protected the ruins, they became more numerous and more coherent, and towards the southern limits of our excavation there could be distinguished in Level I the remains of at least three distinct historical stages.

Unfortunately none of the buildings was particularly interesting. All had foundations of rough limestone rubble, and the upper part of the walls would seem to have been in most cases of crude brick. In Sqq. C 1, D 1, a large building of the first phase (fifth to sixth century) had walls of rubble cement with ashlar quoins; in Sq. D 3, on the outskirts of the excavated area, there was a long wall-foundation of concrete and against it a tumbled mass of big ashlar limestone blocks (0·90 m. sq. or 1·10 m. × 0·60 m. × 0·40 m.) which must have belonged to a building of some architectural pretensions; on the line B 1—C 1 we found re-used in the second period (ninth to tenth century) some good floor-slabs and part of a column-shaft on which was carved a double cross; in Sq. A 3 there lay two granite column-shafts (diam. 0·50 m.), one of them built into a wall of the second phase; in Sqq. A 4, B 4, there were the much damaged foundations of a hall which seems to have had a very distinctive character; a screen supported by pilasters and a central column (the impost for the column-base and the foundations of one pier survived) divided the hall into two nearly equal parts; and towards the SE. end there seems to have been a second screen in the form of an arcade (?) formed of two piers and two columns; two moulded column-bases (shaft diam. 0·35 m.; fig. 1) were found here, but not *in situ*. In the second phase (ninth to tenth century), which was probably not uniform over the whole area, the buildings appeared to have been less regular in their lay-out and generally of a simpler type; a long wall running transversely across Sq. C 2 may have had a columned face, for there were large impost-stones spaced more or less regularly along it. Of phase 3 (twelfth to thirteenth century) the only interesting feature was in Sq. C 3, a room with cement floor in which was a cement-lined silo or oil-pit (part of an olive-press was found close to it). There is no doubt that the best of the buildings of the medieval period lay south of the limits of our excavations, and any judgement on what fell within the area is based on very partial evidence, but it does look as if the first building-phase had been the best, and thereafter there was progressive degeneration.

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[1] *Num. Chron.*, xvii, 1937, 5.

All the ground built over in the medieval period was honeycombed with circular rubbish-pits which, starting at various floor-levels of that period, went down through the earlier strata sometimes to virgin soil; in them were found great quantities of pottery, both plain and glazed, fragments of glass vessels, some coins, and a few bronze objects. Iron tools were not uncommon, but in some instances the date was uncertain, and those of a strictly agricultural character may belong to the time after the abandonment of the site, when cultivation re-started. Of stone objects there were few, amongst them a Kufic inscription too fragmentary to be of value, and an inscription of uncertain date intentionally obliterated.

In the house sites there were very few graves, and where such occurred they were always high up in the soil, higher than the building remains, and would appear to date from the time when the buildings had fallen into decay and their sites had become waste land. They were orientated roughly NW. by SE. and were of a very simple type; the body was laid extended on the ground at the bottom of the (shallow?) grave-pit, the head NW., and above it was built a 'coffin' formed of two rows of terra-cotta roofing-tiles set on edge and leaning inwards so that their tops touched; the ends were closed each by a similar tile. There were never any objects with the bodies But in the NW. part of our site, outside the area built over in the medieval period, there were a few graves of

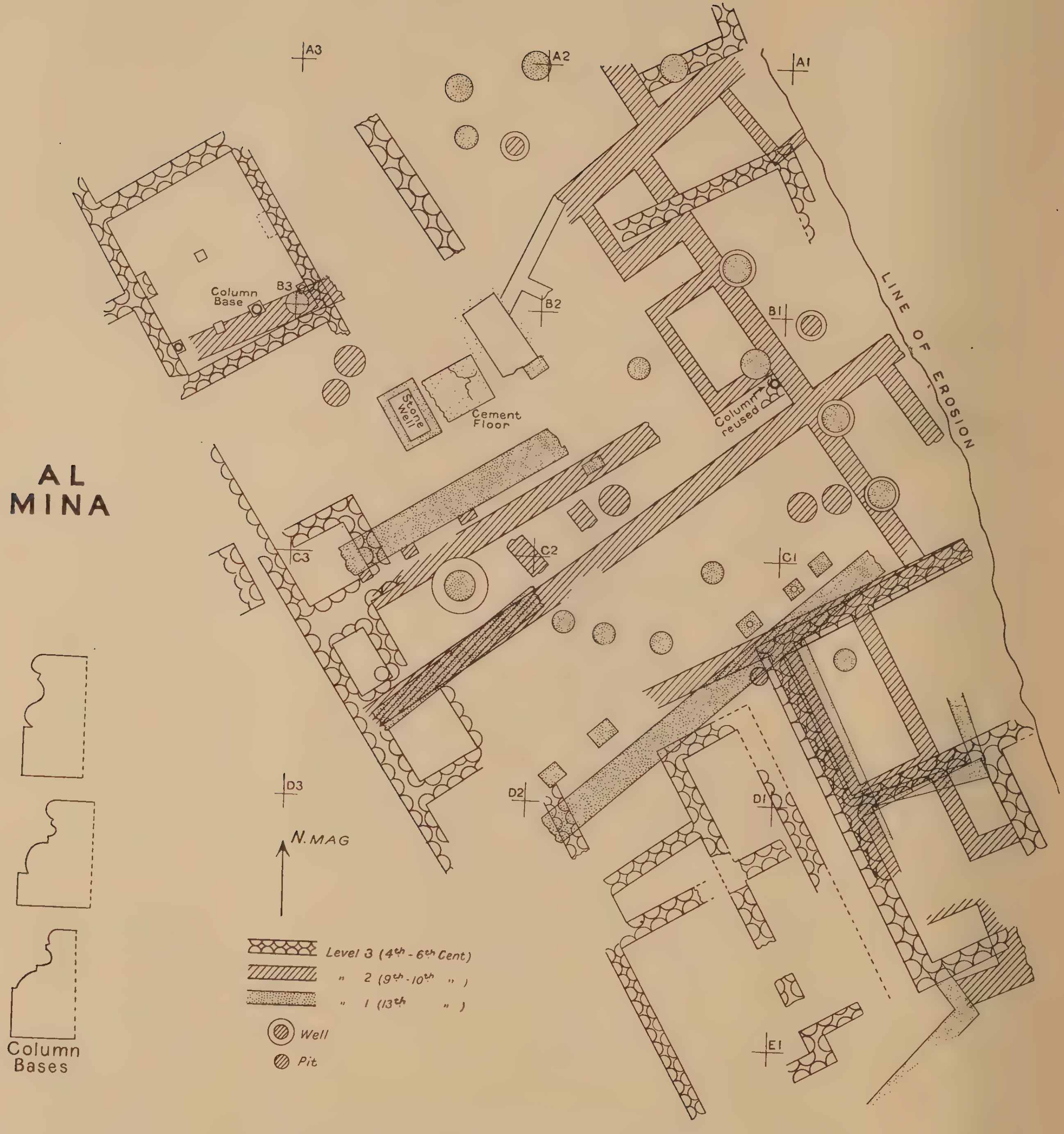
A3
A2
A1
Column Base
B3
B2
B1
Stone Well
Cement Floor
Column reused
LINE OF EROSION
AL MINA
C3
C2
C1
D3
D2
D1
E1
N. MAG
Level 3 (4th - 6th Cent)
" 2 (9th - 10th ")
" 1 (13th ")
Well
Pit
Column Bases

Fig. 1. Plan of the medieval levels (in 10-metre squares)

a different sort. In them, a smaller rectangular pit at the bottom of the grave-shaft was roofed with thin split slabs of stone, or the whole pit was lined and roofed with such slabs; there was no uniformity in the orientation of the bodies, and the grave-furniture, further discussed on p. 74, was confined to simple personal ornaments. These graves appear to date from the fourth to sixth century A.D.

The great majority of the finds consisted of broken pottery and glass. Very few pieces could be completely restored, but the value of this material should not be underestimated on that account. For many years past the European market has been flooded with pottery from the Near East, furtively excavated by peasants and dealers who were naturally unwilling to betray the exact locality and context of their finds so long as there remained a chance of making further profit. As a result, our museums are full of superb works of Islamic Art whose date and provenance must remain unknown until comparable material has been brought to light in scientifically conducted excavations. A few apparently insignificant fragments, the debris left round an ancient kiln, can be surer guides to the classification of early Islamic pottery than any number of better-preserved specimens offered by a mendacious or misinformed dealer. The work of Sarre and Herzfeld at Samarra, and of the French expedition at Susa, has thrown a broad beam of light on the medieval arts of Mesopotamia; the collaborators in the forthcoming Survey of Persian Art, and the Metropolitan Museum expedition to Nishapur, promise similar achievements in Persia. In Syria, medieval finds at Baalbeck and Hama have been admirably published by Sarre and Ingholt, but on those sites the material mainly dates from the fourteenth and fifteenth centuries. Al Mina can show what was being produced in Syria during the ninth and tenth centuries, and the finds dating from the Crusaders' period must inevitably be taken into account by future excavators in Syria and Palestine. It remains to discuss the material in groups classified according to date, origin, and technique.

THE POTTERY

(a) *Coptic pottery: fifth to sixth century A.D.*

Two fragments of fine hard red pottery were stamped with the design of a cross; they came from the middle of flat dishes (fig. 14, K, L). This ware was evidently made in Egypt by Coptic potters who may have intended to imitate the Roman *terra sigillata* ware. The stamped designs found on pottery of this class are usually crosses, but rows of doves, the fish, the Lamb, and artless figures of saints also appear, and in the Cairo Museum is an imitation of an ivory consular diptych in this stamped pottery.[1] The latter is in the style of the first half of the fifth century A.D. and may help to date the ware as a class. Fragments found at Al Mina, Hama, Smyrna, Samos, Pergamon, and Constantinople[1] show that a certain quantity must have been exported.

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[1] The best illustrations are in H. Leclerq, *Manuel d'archéologie chrétienne*, 1907, ii, figs. 352-60. See also O. M. Dalton, *Cat. of Early Christian Antiquities in the British Museum*, 1901, nos. 923-7;

(b) *Pottery of the ninth to tenth century A.D.*

Painted lustre-ware. As excavation proceeded downwards from the surface-level, there appeared large quantities of pottery which was manifestly of a very different style and date from the Crusaders' wares, though in one type the same sgraffiato technique was employed. The material was largely concentrated in rubbish-pits of varying depths, and it was thus impossible to accept distance from the surface as a scale for chronology. It seemed likely, however, that all these different classes of pottery, found in association together, belonged to a single period in the history of the site; the limits of that period could be approximately defined, on the one hand by seeking comparisons with datable material from elsewhere, and on the other by referring to the historical events known to have taken place in the district. The chronology of early Islamic pottery is almost entirely based on the material found in the excavations of Drs. Sarre and Herzfeld at Samarra on the Tigris, which was occupied by the Abbasid court between A.D. 836 and 883 and thereafter to all intents and purposes abandoned. If the majority of the Samarra pottery was made during those fifty years, a similar date may be inferred for examples of the same wares when found on different sites, and of these sites Al Mina is one.

The excavators of Samarra were not fortunate enough to find the kilns where the fine pottery might have been made, and in consequence its origin could still be treated as a matter for controversy.[2] It was felt by some authorities that the ceramic achievements shown by the Samarra finds could not have been worked out during the short time of the city's occupation; either the pottery was brought from another country where there existed a longer technical and artistic tradition, or else, if made on the spot, the workmen must have been immigrants from such a country who had learned their craft at home. The arguments naturally centre round the white-glazed wares painted with metallic

O. Wulff, *Altchristliche und mittelalterliche Bildwerke*, 1909, nos. 1556-61; J. Strzygowski, *Cat. du Musée du Caire, Koptische Kunst*, 1904, nos. 7136-8 and 8979 (copy of diptych).

[1] Finds at Hama: H. Ingholt, *Rapport préliminaire sur la première campagne des fouilles de Hama*, 1934, 19. Smyrna: Wulff, *op. cit.*, no. 1561. Pergamon: *Pergamon*, i, 2, 332, fig. 110. Samos: A. M. Schneider, 'Samos in frühchristlicher und byzantinischer Zeit' (*Athenische Mitteilungen*, liv, 1929), 127, 128. nos. 5, 6. Constantinople: fragments were found under the mosaic discovered by the St. Andrews expedition of 1936–7 (information of Mr. R. B. K. Stevenson).

[2] The very extensive Samarra literature is quoted in the following publications: F. Sarre, *Die Ausgrabungen von Samarra II. Die Keramik von Samarra*, 1925, esp. 36 ff.; R. Koechlin, *Les céramiques musulmanes de Suse au Musée du Louvre*, 1928 (*Mémoires de la Mission Archéologique de Perse*, tome xix).

lustre-decoration, which remained for centuries the highest form of expression in Near Eastern pottery. Drs. A. J. Butler, F. R. Martin, and H. Gallois maintained that this technique was discovered and first practised by the Egyptians; MM. Charles Vignier, Raymond Koechlin, and M. Pézard supported the claim of Persia. Their arguments are partly conjectural and partly capable of refutation; present evidence goes to show that the Copts in Egypt and the Sassanians in Persia made only inferior pottery,[1] and that the renaissance of the art did not begin till well on in the Islamic period. By far the most convincing theory is that of Dr. E. Kühnel,[2] who maintains that the technique of lustre-painting on a white ground was developed in Mesopotamia during the ninth century to meet the demand for luxury wares created by the importation of fine pottery from China. He has worked out a progressive chronology for the Samarra material, which shows, in its earlier stages about the middle of the ninth century, a great variety of colours combined; later the colours are reduced to a greenish-yellow monochrome, and the exuberant patterns, originally intended to contrast the different tones, give place to a rigid stylization with figure subjects. Representations of men and animals are not found on the Samarra pottery, and must therefore have made their appearance subsequent to 883; there was not necessarily a break in continuity of production when Samarra was abandoned, for the kilns may have been all the time at Baghdad. The Mesopotamian fabric continued in the tenth century, but after 970 the service of the Fatimid dynasty in Egypt offered attractions of better patronage to the potters. The secret of making the lustre was evidently closely guarded by a sort of guild, and when its members migrated to Egypt they left no one behind capable of continuing the manufacture on Asiatic soil. Thus when the Persian traveller Nasir i-Khusrau visited Fostat about 1050, he was so far unfamiliar with lustre-ware that he hardly realized it to be pottery. When the Fatimid dynasty fell in 1170, the austere fashions of the Ayyubid court drove the makers of lustre-ware to seek their fortunes abroad; many established themselves in Persia, others perhaps at Rakka in north Mesopotamia, and others still in Spain. It is significant that the earliest known Persian lustre-ware vase with a date was inscribed in a year corresponding to A.D. 1179.[3]

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[1] Coptic pottery: M. A. Murray, 'Coptic Painted Pottery' in *Ancient Egypt*, 1935, 1–15; O. Wulff, *op. cit.*, 285–98. Sassanian pottery: E. Kühnel, *Die Ausgrabungen der zweiten Ktesiphon-Expedition*, 1931–2, 28; D. B. Harden, 'Excavations at Kish and Barghuthiat' in *Iraq*, i, 1934, 124; Koechlin, *op. cit.*, 37 ff. The Byzantine polychrome bowl in Kiev, illustrated in *Ars Islamica*, iii, 1936, 106, fig. 10, and by M. Makarenko, 'Un vase provenant de l'Asie Mineure à Kiev' in *Recueils d'Histoire d'archéologie, des mœurs et des arts de Kiev*, i, 1930, 97–100, has been erroneously claimed as Sassanian (by A. U. Pope, *An Introduction to Persian Art*, 1930, 66). The blue-glazed pots, with figure decoration in high relief, illustrated by Pézard, pls. v–vii, are apparently forgeries.

[2] 'Die abbasidischen Lüsterfayencen' in *Ars Islamica*, i, 1934, 149 ff.

[3] E. Kühnel, 'Dated Persian Lustred Pottery' in *Eastern Art*, iii, 1931, 220, fig. 1.

Under these circumstances it seems unnecessary to seek for the origins of lustre-ware, as a technique, outside Mesopotamia; the artisans round the court were summoned from all parts of the Islamic world, but their greatest achievements began when they came under the direct patronage of the Caliph. Yakubi, writing still in the ninth century, records that potters were brought to Samarra from Basra and Kufa;[1] if they had come from Egypt, bringing knowledge of the celebrated lustre-ware, he would surely have mentioned that fact, particularly as he does not fail to notice the introduction of Egyptian papyrus-makers. It has been suggested[2] that the manufacture of lustre-ware was introduced into Egypt from Mesopotamia as early as the reign of Ahmed ibn Tulun (A.D. 868–84), who may have invited potters to his court at the time when he was building his Great Mosque. So far, however, no fragments found in Egypt and distinguishable by clay or otherwise from the imported Mesopotamian ware have been convincingly assigned a pre-Fatimid date.[3] The tenth-century Mesopotamian kind, with figures in 'contour-panels' on a dotted ground, was found in some quantity at Fostat, which would hardly have been the case if it had had to compete with a local, and therefore cheaper, product in the same technique. One group of Fatimid lustre-ware is very obviously derived from the tenth-century Mesopotamian type,[4] but shows a technical innovation in the engraved inner markings through the lustre ground—an expedient regularly used on all the later Fatimid lustre-ware. It is reasonable to put the fragments in question at the beginning of the Egyptian series. They could not have been made in Ahmed ibn Tulun's time, as their prototypes had not yet appeared; hardly between the fall of the Tulunids in 904 and the arrival of the Fatimids in 969, owing to the unsettled political conditions and absence of enlightened patronage for the potters.[5] They should, then, be dated early in the Fatimid period; near them in point of time is a remarkable bowl painted with an elephant and inscribed *'amal [I]brahim bi Misr* (the work of Ibrahim in Egypt), which in the concentric circles and dotted ground of the reverse shows the last gasp of the Abbasid style.[6]

The best fragments of lustre-ware found at Al Mina are reproduced on pl. XVI, I. All show the typical sandy yellow 'Samarra' body; they must have been accidentally broken and discarded here while on their way from Baghdad to Egypt along the trade-route already described. The shapes are all open bowls, with the exception of the jar and the wing of a small dish in the form of a bird[1] (pl. XVI, 1 D, E). Two pieces (A, B) are painted in brown and yellow lustre, a colour combination found on the tiles of the Great Mosque at Kairouan near Tunis which are supposed to have been brought from Baghdad about A.D. 862.[2] The remainder are in monochrome greenish-yellow lustre. Pl. XVI, 1 C, shows part of an animal and a ground pattern of dotted circles, a motive more appropriate to the polychrome treatment which had just gone out of fashion. Kühnel dates such pieces about 875–80 (*Ars Islamica*, i, 1934, p. 154, figs. 5, 6). The rest may be compared with fragments from the tenth-century sites of Medina Azzahra in Spain[3] (founded in A.D. 936) and Brahminabad in Sind:[4] they include pieces with parts of the *baraka lisahibihi* inscription found on so many kinds of early Islamic pottery.[5]

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[1] Quoted by G. Wiet, *Ars Islamica*, iii, 1936, 172.

[2] By Kühnel, *Ars Islamica*, i, 150.

[3] Aly Bey Bahgat, in his *Céramique musulmane de l'Égypte*, 1930, has evolved a purely arbitrary system of dating which places certain fragments in pre-Tulunid times; his argument is vitiated by his failure to distinguish between the native and imported wares. See also the review by S. Flury in *Syria*, vii, 1927, 268.

[4] Aly Bey Bahgat, *op. cit.*, pl. VII.

[5] S. Lane-Poole, *A History of Egypt in the Middle Ages*, 1901, 77 ff.

[6] G. Wiet, 'Deux pièces de céramique égyptienne', in *Ars Islamica*, iii, 1936, 172 ff.

These fragments of lustre-ware thus suggest an initial date round the middle of the ninth century for the rest of the pottery found in association with them; they extend into the tenth century, and by invoking historical evidence we may assume that the Byzantine invasion of 968–9 brought to an end this phase in the occupation of the site. The absence of Fatimid wares confirms us in proposing this date as a terminus.

Wares with decoration painted over white glaze. The opaque white enamel or glaze which formed the ground for the lustre decoration was also used in Mesopotamia on less luxurious wares. Among the Chinese imports at Samarra were a number of cups with lobed rims and radial ribs, some made of the finest white porcelain, others of stoneware more or less approaching it; none of these bore painted decoration.[6] The local potters, using their soft sandy clay and white glaze, made excellent imitations of these Chinese cups, and one example found its way with the lustre-ware to Al Mina. It is shown on pl. XVI, 2; the potting is very fine, there are five radial ribs, and a dull creamy glaze covers the whole, including the rudimentary foot-ring.[7] Quite large bowls of this kind were also made; fragments from Samarra in the Victoria and Albert Museum show a red body like that of the sgraffiato-ware instead of the yellow body that usually goes with the opaque white glaze. Al Mina produced one or two fragments of these large ribbed bowls, presumably brought from Mesopotamia, though it is by no means impossible that the same type was manufactured in Egypt.

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[1] Compare R. L. Hobson, *Guide to the Islamic Pottery of the Near East* (British Museum), 1932, pl. IV, 14.

[2] G. Marçais, *Les faïences à reflets métalliques de la Grande Mosquée de Kairouan*, 1928, 10–13.

[3] Velazquez Bosco, *Medina Azzahra y Alamiriya*, 1912, pls. XLIX–LII; E. Kühnel, 'Daten zur Geschichte der spanisch-maurischen Keramik', in *Jahrbuch der asiatischen Kunst*, 1925, 170.

[4] R. L. Hobson, *Guide*, 8–10, and *Oriental Ceramic Society Transactions*, London, 1928–30, 21 ff.

[5] See S. Flury, 'Une formule épigraphique de la céramique archaïque de l'Islam', in *Syria*, v, 1924, 53 ff., esp. pl. XXI.

[6] *Samarra*, ii, nos. 214–17.

[7] Diameter, 13·5 cm. Found in 1936; now in the British Museum.

The inventive genius that had produced lustre-ware soon evolved another less expensive but equally attractive technique of decoration; the white-glazed wares were painted with simple patterns or inscriptions in colours among which cobalt blue played a leading part, supported by copper green, manganese purple, and occasionally a rich yellow.[1] Figure-subjects are conspicuously absent, even in specimens found on sites with the tenth-century lustre-ware that commonly displays them. This 'blue-and-green' family was exported to Persia—many examples were found at Rayy and Susa—but none has so far been reported from Syria or Egypt. There can be no doubt that it was made in the same factories as produced the lustre-ware, for two bowls in the Victoria and Albert Museum, the one painted in ruby, the other in yellow lustre, bear inscriptions in blue as part of the design.[2]

There have been found on Egyptian sites examples of painted pottery which bear a certain resemblance to the 'blue-and-green' wares of Mesopotamia. The clay is coarse and gritty, of a greyish-yellow colour that sometimes burns to pink; the white glaze usually has a pitted surface like that of melted wax, and seldom covers the reverse of the bowls or dishes except for a thin smear. The decoration seems to be carried out in copper green and manganese purple, never in the blue so characteristic of Mesopotamia; the motives comprise dotted interlacing bands, Kufic inscriptions, blotches of mingled green and purple, and rudely drawn figures of animals. This ware has hardly been noticed in ceramic literature,[3] but there are several examples from Egyptian sites in the Victoria and Albert and British Museums, and a number of fragments at Al Mina were certainly of the same origin. Bowls with convex or spreading sides and flat dishes with horizontal rims were the only shapes; one had a large dotted rosettte in green and purple in the middle, others mere blotches of mingled colour. The shapes are comparable to those of the Samarra wares, and the fabric no doubt began as early as the ninth century, if not before; the same opaque white enamel with added colours is used on Egyptian pottery of Roman times.[4] It probably continued throughout the Fatimid period, for a bowl in the same technique in the Victoria and Albert Museum has the straight sides and high foot found in the twelfth- to thirteenth-century Rakka ware.

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[1] *Samarra*, ii, nos. 165–96; *Les Céramiques musulmanes de Suse*, nos. 82 ff. Pézard, pls. CIII–CIX.

[2] Victoria and Albert Museum, *Review of Principal Acquisitions*, 1931, 15, fig. 8, and *op. cit.*, 1934, 8, 9.

[3] Aly Bey Bahgat and F. Massoul, *La Céramique musulmane de l'Égypte*, pl. XLVIII, 81; S. Flury, *Syria*, xiii, 1932, 100.

[4] A. J. Butler, *Islamic Pottery*, pl. V A.

Glazed relief-ware, with and without lustre. An uncommon type of early Islamic pottery, and one whose origin has provoked much discussion, is that with decoration in low relief formed by a mould and covered with glaze. Many fragments were found at Samarra (*Samarra*, ii, nos. 125–46), more at Susa (*Suse*, nos. 123–41); Hira, Rayy, and Brahminabad have also produced isolated sherds.[1] They come from small vessels—cups with vertical sides, of the same shape as the glass cups in figs. 11 D, 12 B, and shallow dishes often supported on three feet. The decoration shows great variety; Coptic, Persian, and Chinese influences are all apparent, and one piece (*Suse*, no. 130) was directly copied from an imported Chinese bowl of a class represented by sherds at Samarra (*Samarra*, ii, no. 222). A green monochrome glaze covers the less elaborate pieces, while the better ones are covered with a yellow-ochre glaze that shows metallic reflections somewhat similar to those of the painted lustre-ware. Some of the latter have had spots or patches of copper green added to the lustre-colour. A single fragment found at Al Mina (pl. XVIII, 1 B) belongs to a shallow bowl of this class; the clay is very fine, deep salmon-pink, and most of the glaze has decayed into a sulphurous powder. The technique is identical with that of Samarra fragments in the Victoria and Albert Museum, while the decoration may be compared with *Suse*, no. 139. Sarre and Kühnel hesitate to accept a Mesopotamian origin for these wares because the clay is so different from that of the other Samarra types, but to the present writer that argument is not entirely convincing. Different kinds of clay would be used to suit varying kinds of technique in a single country, and the hybrid character of the designs might be easily explained if the wares were made in Mesopotamia, a meeting-ground for the most diverse artistic influences.

It appears that a similar ware was also made in Egypt; here lustre-colour was evidently not employed, but in its place a combination of different-coloured glazes on a single piece. There is a fondness for animal figures in the decoration, such as the three ducks on a famous fragment in the Homberg collection,[2] while the example of imported Chinese stone-ware led to local imitations as it had in Mesopotamia. There are four pieces of the Egyptian ware which were signed by a single potter, one Abu or Abi Nasr en Nasri (or Basri). The first, in the British Museum, is a square green-glazed plaque with nine cup-shaped depressions, these glazed deep yellow.[3] Round the edge runs a Kufic inscription which has been read *'amal Abu Nasr en Nasri bi Misr*, 'the work of Abu Nasr en Nasri in Egypt'. Part of a similar plaque (a condiment-dish) in Berlin came from Akhmim, and bears the inscription *Abi Nasr en Nas* ... (*Samarra*, ii, p. 82). A third piece, also from a condiment-dish, but made in a different mould, was found at Al Mina (pl. XVIII, 1 D). The clay is pinkish buff, hard, and full of small dark grains; the upper surface glazed with green, the wells with an opaque orange-yellow. The inscription reads *en Nasri* (or *el Basri*) (see p. 76, no. 5). A fourth piece, part of a bowl found at Fostat, and published by Fouquet, bears an inscription which has been read *'Aamal abi Nasr el Nos* ...[1]

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[1] I hope to deal with this ware at greater length in a forthcoming article, 'Glazed Relief-ware of the Ninth Century', in *Ars Islamica*.

[2] Pézard, pl. XII.

[3] This group will be more thoroughly described in my *Ars Islamica* article quoted above, where I have incorporated the suggestions about the epigraphy so kindly offered by Mr. Rhuvon Guest.

It is not surprising that both the Egyptian and Mesopotamian branches of this ware should be represented at Al Mina; the lustred Mesopotamian type has turned up even in Egypt, and though so far no definitely Egyptian pieces have been reported from Mesopotamia, the Al Mina find shows they were sent some part of the way.

Sgraffiato and kindred wares. The Chinese pottery found at Samarra included specimens of white stone-ware, with a clear glaze spotted or mottled with green and yellow-brown—a Tang type common in China, but highly prized in the Islamic countries where it arrived in course of trade.[2] It was copied by the Mesopotamian potters, and doubtless served as a model for similar wares made at Samarkand and Nishapur,[3] though genuine Chinese pieces have not hitherto been reported from those sites. The Tang pottery, which may be presumed to have reached eastern Persia, was probably brought by land over the Pamirs, but the fragments found in Mesopotamia and Egypt almost certainly came by sea round India. The American excavators at Nishapur have found reason to believe that local imitations were being made in the Khorassan as early as the late eighth and beginning of the ninth century, but in Mesopotamia the fabric apparently did not start till the Samarra period. There the clay used was pink or red, with a white slip, coated with a clear lead glaze, in which the green and yellow-brown pigments ran freely. A few of the Chinese pieces at Samarra showed additional decoration in the form of patterns incised in the body under the lead glaze (*Samarra*, ii, no. 220); such pieces were apparently rare even in China, but they suggested to the Islamic potters a process of which they took full advantage. The sgraffiato technique evidently spread through the Near East from the Mesopotamian capital—fragments found at Susa would seem to be the product of local kilns in the ninth or tenth century (*Suse*, nos. 112–22), and by the eleventh and twelfth sgraffiato-ware had become a common type widely diffused through Mesopotamia.[1] Egypt also made sgraffiato-ware of this kind,[2] perhaps copying the imported Tang wares without prompting from the neighbouring lands.

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[1] D. Fouquet, *Contribution à l'étude de la céramique orientale*, 1900, pl. XV, 1, and p. 125.

[2] *Samarra*, ii, nos. 218–21. A fragment of this class from Fostat is in the Victoria and Albert Museum, and others are in the collection of Mr. George Eumorfopoulos.

[3] K. Erdmann, 'Ceramiche di Afrasiab', in *Faenza*, XXV, 1937, 129, 130; *Metropolitan Museum Bulletin*, xxxiii, 1937, no. 10, 'The Iranian Expedition', 13, 14.

The ninth- to tenth-century level at Al Mina contained great quantities of lead-glazed pottery with a white slip. It takes three forms: first, the pieces with flowing colours or spots of green, yellow-brown, and manganese purple which form no definite pattern and are unaccompanied by incised decoration; second, those in which the colours are painted on in a definite design, still without engraving; and third, those with flowing colours or monochrome glaze over incised patterns—true 'sgraffiato-ware'. In every case the clay is light red, hard, and thinly potted, the exterior often bearing knife-marks where it was pared down while spinning on the wheel; the thin white slip and lead glaze cover the entire surface of the bowls and dishes, including the foot-ring and the space inside it. The glaze commonly decays into a sprinkling of fine white powder. No spur-marks are visible under the feet, and it is uncertain what means of support was used in the kiln. The range of shapes is shown in fig. 2; bowls

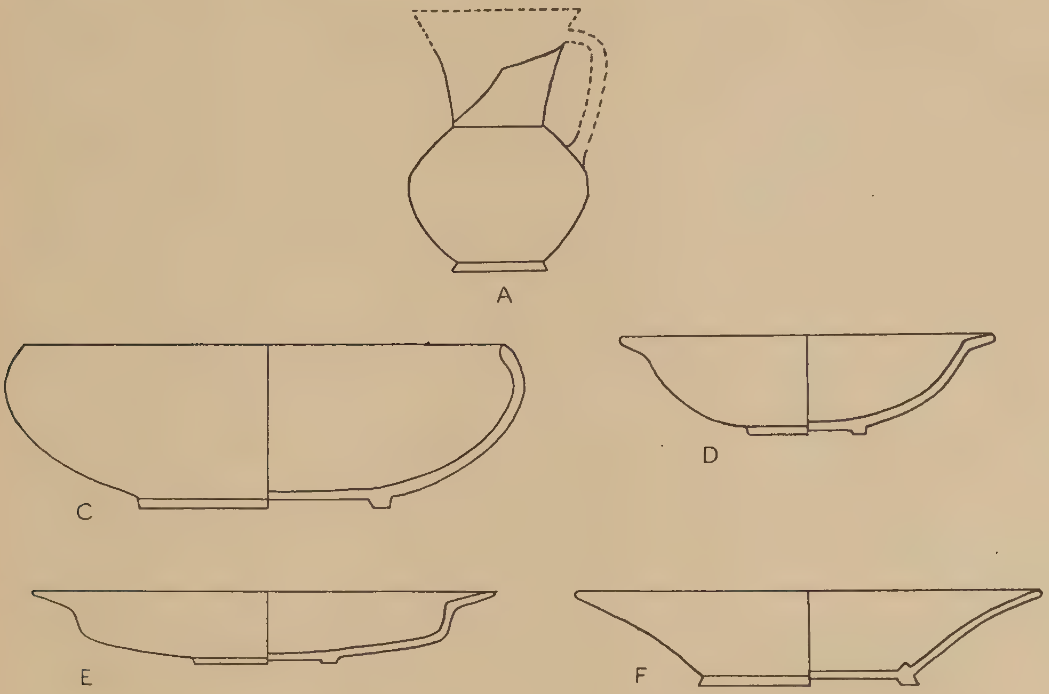

Fig. 2. Sgraffiato-ware, ninth to tenth century

with curved-in rims were by far the commonest. The shallow foot-ring, very wide in diameter, is characteristic of the whole series.

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[1] *Ars Islamica*, ii, 1935, 201–2 (sgraffiato-ware from Kish); *Samarra*, ii, nos. 262–73 (eleventh to twelfth century).

[2] Fragments in the Victoria and Albert Museum, from Fostat, nos. c. 932–5, 1921.

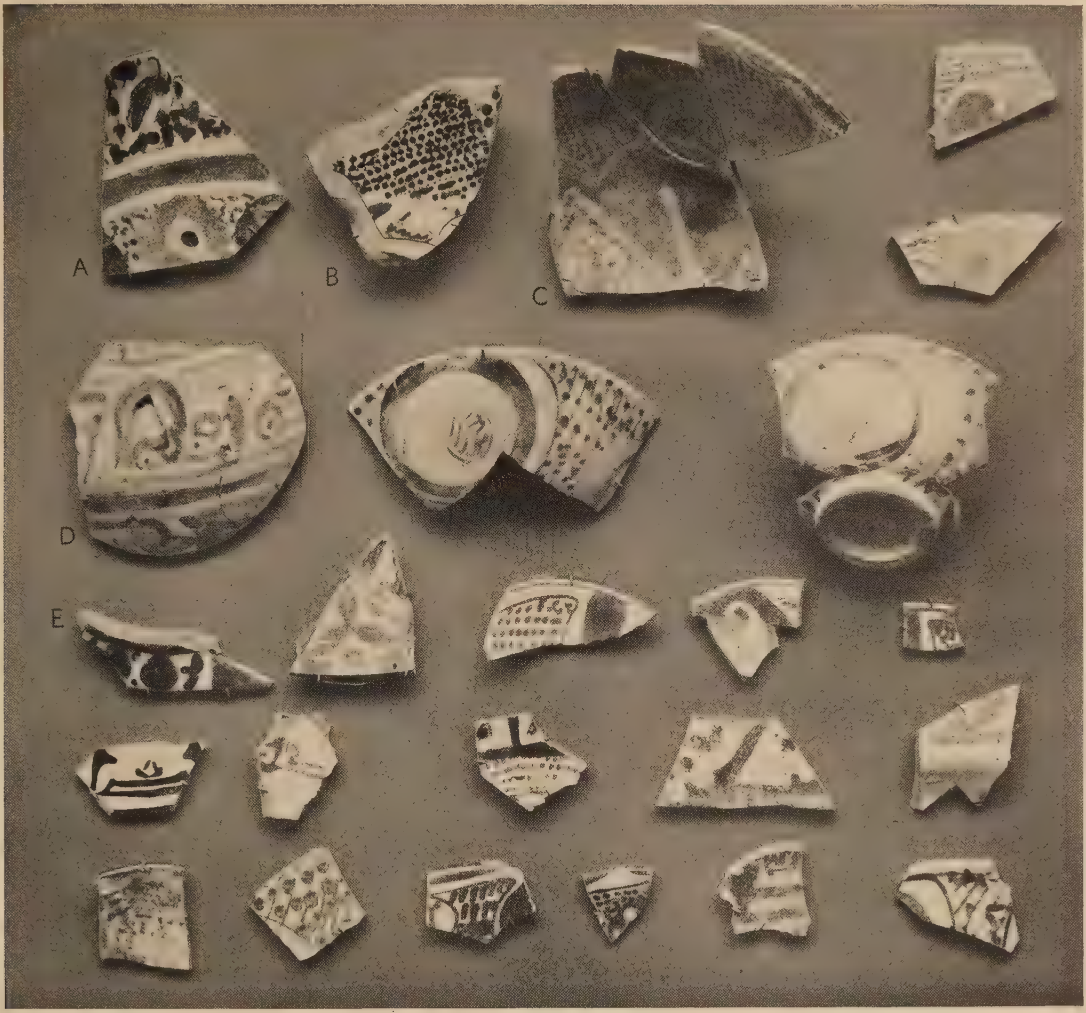
The pieces with flowing green and yellow-brown streaks included a bowl almost exactly like one illustrated in *Samarra*, ii, no. 239; it differs in its deeper shape and heavier potting from most of the other Al Mina fragments, and after comparing it with the Samarra finds in the Victoria and Albert Museum I am convinced that it was imported from Mesopotamia. A bowl closely resembling *Samarra*, ii, no. 244, and acquired by the British Museum from the excavations of 1936, appears to be of the same origin. A small jug (fig. 2A) may be compared with a somewhat similar piece found at Susa, containing coins of the first half of the tenth century (*Suse*, no. 112).

Very few fragments bore patterns distinctly painted on the white slip under the glaze. The bowl on pl. XVI, 3 (shape as fig. 2F), has a design of buds radiating from a dotted hexagon, painted in purple with petals and dots of green and yellow-brown. A somewhat similar design is shown by a bowl of the 'blue-and-green' family from Samarra (*Samarra*, ii, no. 173).

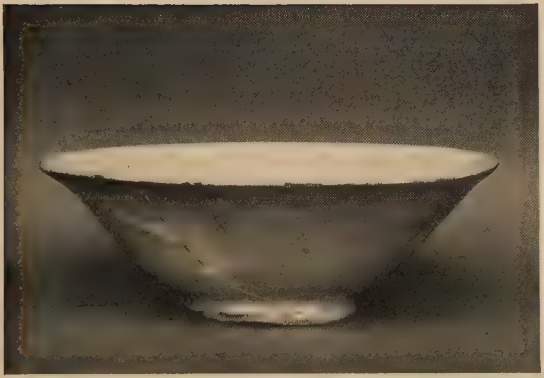
By far the majority of the fragments were decorated with patterns lightly incised through the slip and covered with casually intermingling splashes of colour. Triangular or wing-shaped motives with double outlines, filled with scale-pattern or debased half-palmettes, commonly appear as scattered units of a rather helpless design (pl. XVII, 1, 2 (left)); the treatment should be contrasted with that of later periods when the patterns are broken up and diffused in continuous scribbles over the whole surface. The radial arrangement of pl. XVIII is more satisfactory, but the most interesting pieces are two bowls with figures of birds, one in side view, the other displayed under a monochrome green glaze (pls. XVII, 2 (right); XVIII, 3). A border of rudimentary cable-pattern is often found inside the lip of the bulging bowls, and is almost invariably present on the rims of dishes or bowls with turned-out lip (pl. XVII, 1; fig. 2D, E).

It is probable that some of the Al Mina splashed and sgraffiato-ware was imported from Mesopotamia; an Egyptian source cannot definitely be ruled out for the rest, but such common pottery was hardly worth extensive transport to distant places. We may assume that most of it was made somewhere close at hand in north Syria by potters who had derived their technique from the kilns at Samarra or Baghdad.

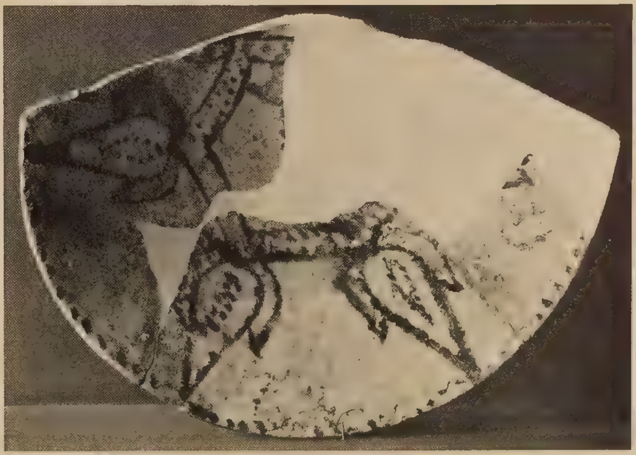
A curious application of the sgraffiato technique which has, I think, never been mentioned before, is seen in the fragments on pl. XVIII, 1 AAA, all coming from one bowl of the shape of fig. 2D. Open vessels like this were thrown on the wheel upside down over a humped form which gave the inside of the bowl its shape. The form itself would normally be made of baked clay. In this case, a design was incised in the form before it was fired, and when a bowl was thrown



1. Painted lustre-ware; ninth to tenth century



2. White-glazed Mesopotamian bowl; ninth century (British Museum)



3. Syrian bowl with underglaze painting; tenth century

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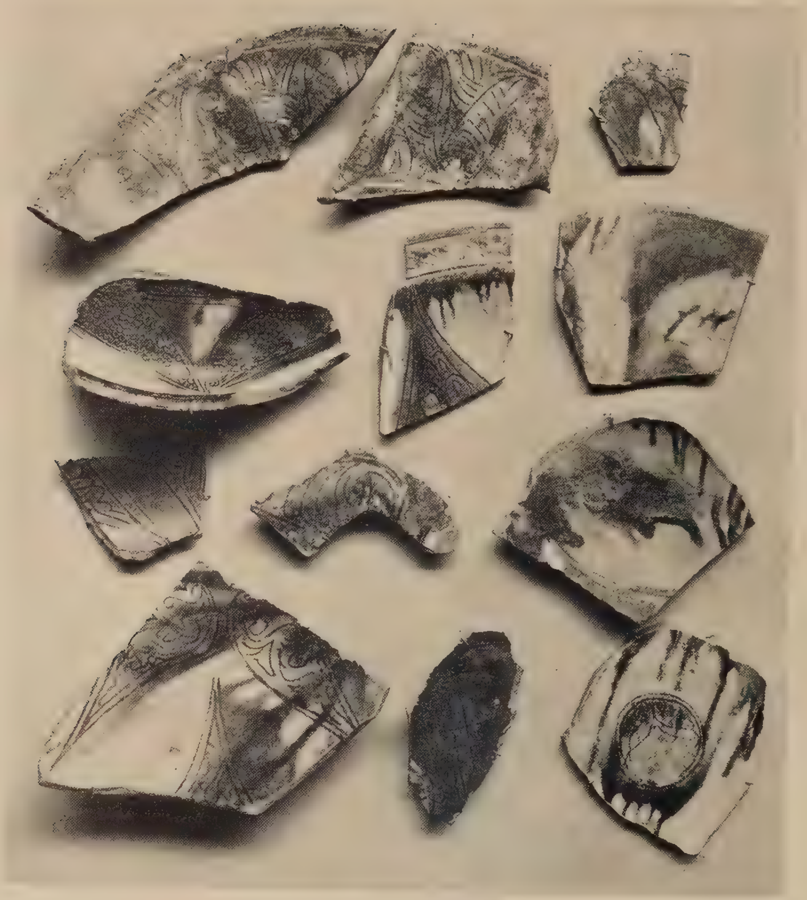
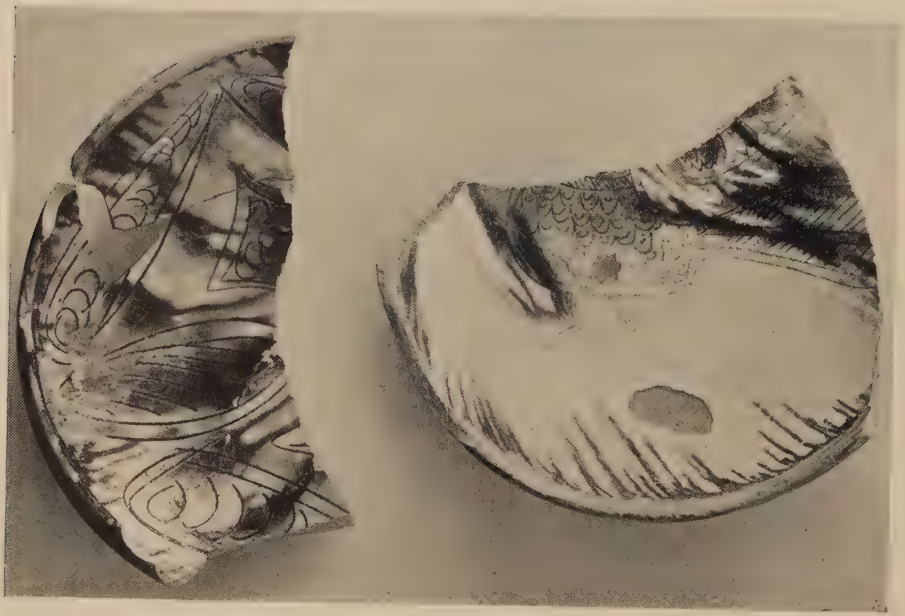


1. Syrian sgraffiato-ware; ninth to tenth century



2. Syrian sgraffiato-ware; ninth to tenth century (Antioch Museum)

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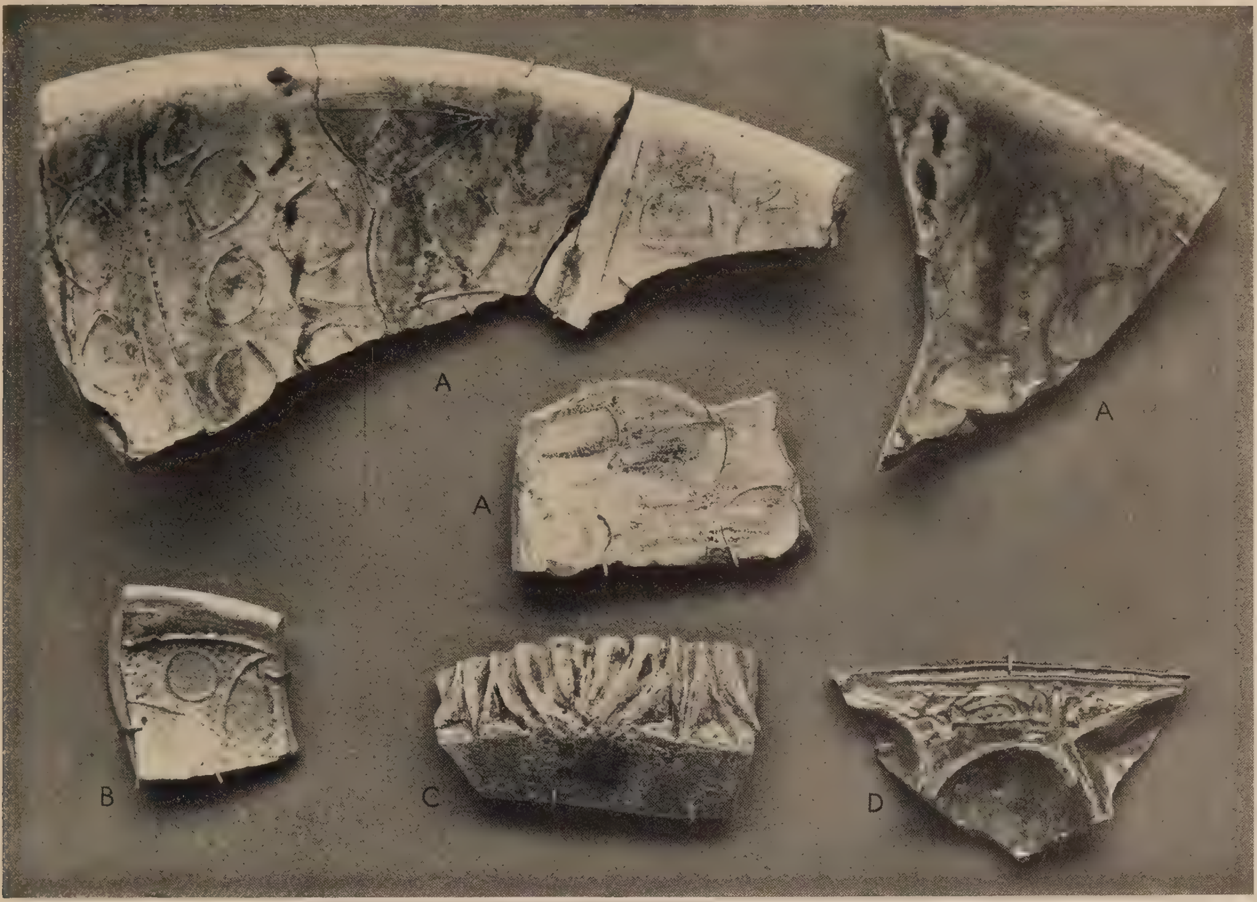
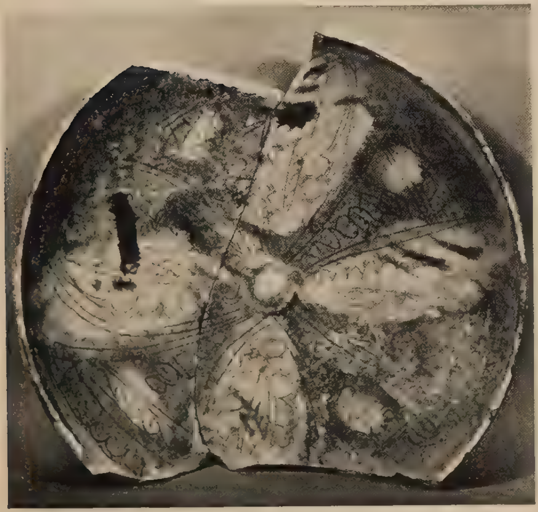
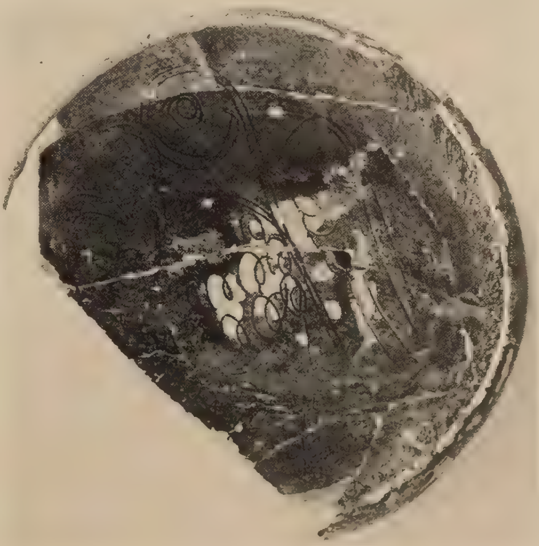


1. AAA, Syrian sgraffiato-ware; B, Mesopotamian lustred relief-ware; C, green-glazed ware; D, Egyptian glazed relief-ware; ninth to tenth century



2. Syrian sgraffiato-ware bowl; ninth to tenth century (British Museum)



3. Syrian sgraffiato-ware bowl; ninth to tenth century

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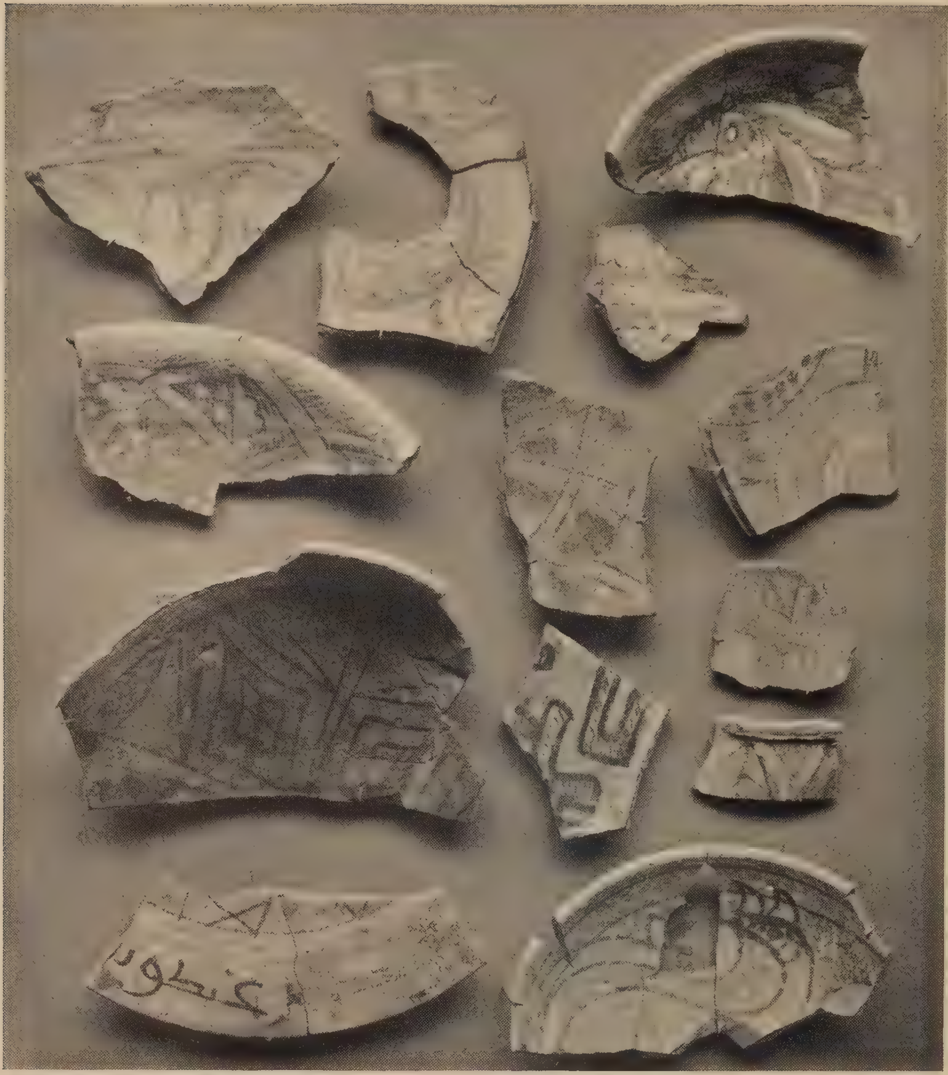
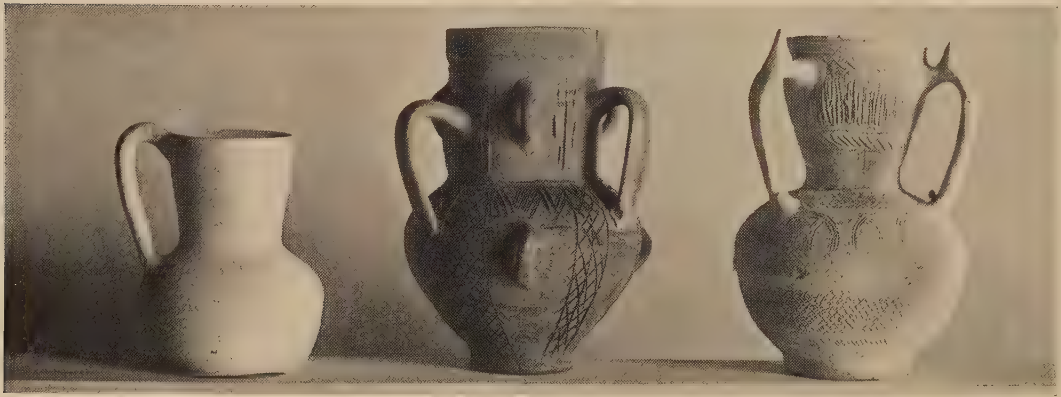


1. Syrian ware with underglaze painting on the clay; ninth to tenth century



A B C

2. A, C, unglazed water-vessels; B, coarse red ware water-pot; ninth to tenth century

Published by the Society of Antiquaries of London, 1938

over it, the clay was pressed into the incised pattern so that it stood up in slight relief on the finished vessel. The design consists of broad radial panels containing a stylized tree motive on a background of small circles; the added colours are green, yellow-brown, and purple, in splashes and dots as on the normal sgraffiato pieces.

Wares with underglaze painting. Well-defined painted designs under a transparent glaze did not appear on the fragments found at Samarra, and it was not till about the end of the twelfth century that this form of decoration began to play an important role in the pottery of the nearer East. The wares made at Rakka, Rusafa, and other places in Syria and Egypt are commonly covered with a thick, siliceous glaze that does not cause the underlying painted patterns to run and become blurred in the firing. The latter was a defect liable to occur when a lead glaze was used, as we can see in the tenth-century fragment on pl. XVI, 3, where the patterns are painted over a white slip. A further contemporary experiment in this technique is shown on numerous fragments discovered at Al Mina in the same level, of which a selection is illustrated on pl. XIX, 1. The clay of these pieces is coarse, light red, and softer than that of the sgraffiato-ware; the potting is clumsy and the foot-ring ill defined, often only slightly hollowed underneath. Otherwise the shapes of bowls and dishes are similar to those in fig. 2. The decoration is painted directly on the clay body without an intervening white slip, the outlines being in dark brown or purple, and most of the ground filled in with a thick mustard-yellow, opaque white, or green. The surface is then covered with a transparent lead glaze just overlapping on to the reverse; where no colour masks it, the body shows light greyish brown under the glaze. The patterns consist mainly of half-palmettes, dotted concentric circles, intersecting bands, and a running leaf-motive;[1] one dish has a Kufic inscription on the rim.[2] The general style of this rather crude ware is that of the Abbasid period, and it must be dated with the associated finds between about A.D. 850 and 968. Similar fragments have been found by the Princeton expedition at Antioch; there is no reason for doubting their local origin. A comparison suggests itself with some Samarra fragments that show rather similar patterns painted in thick colours on unglazed pottery;[3] our fragments belong to a later stage in technical development marked by the use of a superimposed transparent lead glaze. Pottery of the same type found at Kish has been tentatively dated by Mr. Reitlinger in the eleventh to twelfth century.[1] It must have been a technique widely diffused in the local factories of Syria and Mesopotamia, but destined to fall out of use with the development of the thick siliceous glaze that became so popular in this region from about the twelfth century onwards.

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[1] Pl. XIX, 1, top left; compare *Samarra*, ii, no. 253, and E. Herzfeld, *Wandschmuck von Samarra* (*Samarra*, i), 1923, pls. LXVII, 195; LXIX, 193 b.

[2] Pl. XIX, 1, bottom left; see also p. 76, no. 4.

[3] *Samarra*, ii, nos. 113–24; *Suse*, nos. 72–81, 107. The Victoria and Albert Museum has recently acquired a small jug of fine, whitish ware painted in glassy yellow, brown, and green colours, with dull purple outlines (c. 198, 1937)—clearly the same kind of thing as *Samarra*, ii, no. 122.

Green-glazed ware. The so-called 'Parthian' pottery,[2] with its blue or green siliceous glazes and predominantly classical shapes, appears to have been made continuously in the Near East for hundreds of years. The fragments found at Dura-Europos must be dated, on the evidence of coins, in the period before Dura was sacked by the Sassanians in A.D. 256, while the green-glazed amphorae found at Samarra show that the shapes and technique remained practically the same in the ninth century (*Samarra*, ii, nos. 93–5). The dating of an individual pot between these extremes must generally remain a matter for conjecture. At Al Mina, a few fragments of small handle-less jars, with yellow clay and thin green glaze, resembled a fragment found at Dura (*Fouilles de Doura-Europos*, ii, pl. CXIX, 8); they may be imports from Rakka, contemporary with the Coptic stamped red ware of the fourth to fifth century (p. 27). Other pieces belonged to small jars like *Samarra*, ii, figs. 71–3; a heavier fragment, from a large bowl, had a band of thumbed relief like *Suse*, pl. VI, no. 63. Our pl. XVIII, 1 C, shows a bowl-fragment with sliced cutting (*Kerbschnittmuster*), and a green glaze on both sides over a red body; it may be compared with *Samarra*, ii, nos. 107, 108. These few pieces may have been imported from Mesopotamia in the ninth century.

Unglazed water-vessels. The unglazed, porous pottery used for water-vessels in all Islamic countries was also present at Al Mina. Most of the fragments came from the same levels as the wares of the ninth- to tenth-century occupation, and few with any recognizable character could be attributed to the Crusading period. The clay, pinkish in the break, burns greenish white or pale buff on the surface. The shapes shown on pls. XIX, 2 A, C; XX, 2, and in figs. 3 and 4 are mostly undecorated, but sliced or incised ornament is found on the shoulders of fig. 3 K (see pl. XX, 2 A, B), and on the neck of fig. 3 G. Elaborate moulded decoration was present on the three-handled water-bottles and lamps (pls. XIX, 2 C, XX, 2; figs. 3 F, 6 D). The former were made in three separate parts joined horizontally at the base of the neck and round the bulge of the sides; inside the neck was a filter cut into a simple design. The patterns (pl. XX, 2) consist chiefly of cell-diaper, arcades, rosettes; in one case an illegible inscription in ornamental Kufic runs round the side, while another bears the signature of the maker moulded under the base.[1] The ornament shows less variety than somewhat similar fragments at Samarra.[2] The lamp (fig. 6 D) is of a type common in Egypt. The 'barbotine' technique of applied clay was not represented at all, but unfired painted decoration of concentric circles in a thin greyish colour was sometimes laid over the moulded patterns on the water-bottles. The jar (fig. 3 E) was painted in this way with a thin purplish-red pigment. Fired enamel colours are used on pottery of this class from Susa and Samarra,[3] and a jug in Munich[4] is covered with green spots; one fragment from Al Mina bears similar spots in thick yellowish enamel, now badly decayed.

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[1] *Ars Islamica*, ii, 1935, 204–10.

[2] For a fuller discussion and references to the literature, see Sarre and Herzfeld, *Archäologische Reise im Euphrat- und Tigris-Gebiet*, iv, 1920, 4–10; *Suse*, 37–53; F. and M. Massoul in F. Cumont's *Fouilles de Doura-Europos*, i, 1926, 454–76; M. Rostovtzeff, *Caravan Cities*, 1932, 117, 119 (on the dating of Dura); N. C. Debevoise, *Parthian Pottery from Seleucia on the Tigris*, 1934.

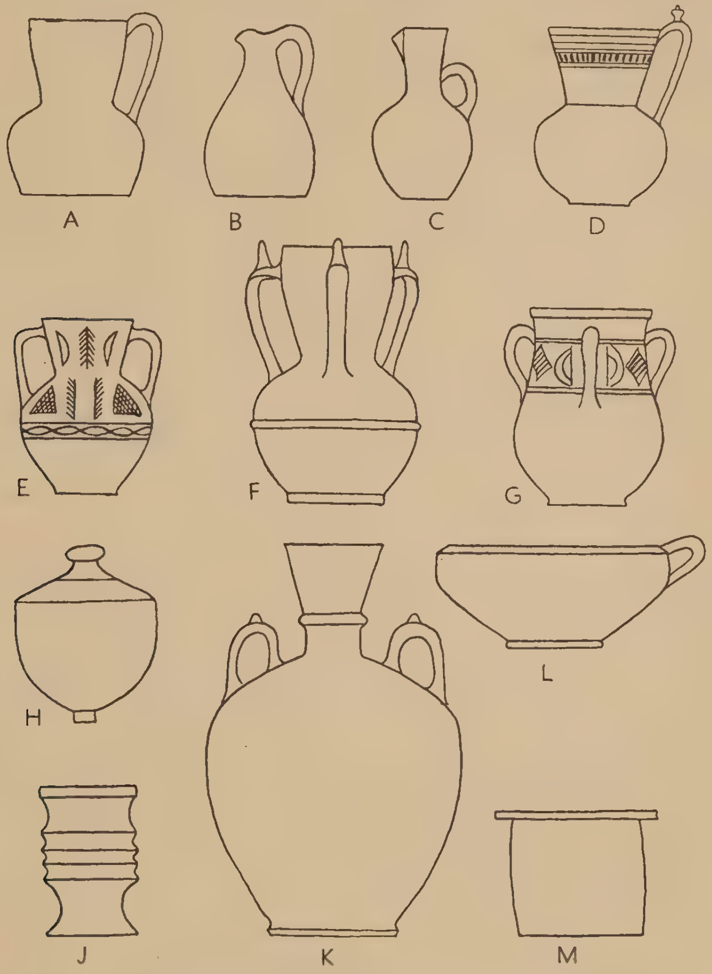

Fig. 3. Unglazed water-vessels, mainly ninth to tenth century

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[1] See appendix, p. 76, nos. 2, 3.

[2] *Samarra*, ii, 13–14.

[3] *Suse*, nos. 72–81; *Samarra*, ii, nos. 120–4.

[4] Sarre, 'Frühislamische Keramik aus Mesopotamien' in *Cicerone*, 1929, 37, fig. 1.

The only pieces illustrated for which I should propose a thirteenth-century date are the trefoil jug (fig. 3 C), which in shape resembles a green-glazed Lusignan jug from Cyprus in the Victoria and Albert Museum; the bomb of reddish clay (fig. 3 H), resembling bombs from Baalbek,[1] and the fragment (pl. XX, 2 D). This, with its deeply moulded pattern, evidently came from a twelfth- to thirteenth-century jug like those found in Mesopotamia, and perhaps made at Mosul.[2]

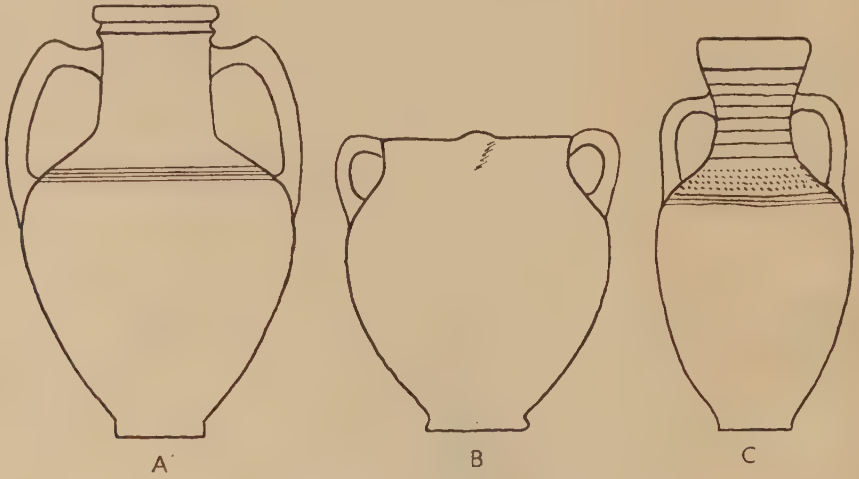

Fig. 4. Unglazed water-vessels, ninth to tenth century

This unglazed pottery has been little studied. Since the bibliographies of the subject given by Sarre and Koechlin,[3] there have been publications of unglazed Sassanian pottery from Kish,[4] of eighth- to ninth-century moulded and incised ware from Hira,[5] of incised and painted specimens from Nishapur,[6] of pierced strainers from Egypt,[7] and of fourteenth-century Syrian moulded wares.[8] A complete vase of the kind attributed by Sarre to the twelfth- to thirteenth-century fabric of Mosul, with elaborately modelled handles, has been published in the guide-book of the Damascus Museum.[9]

[1] F. Sarre, *Keramik und andere Kleinfunde der islamischen Zeit von Baalbek*, 1925, 22, fig. 66, 2, 4.

[2] Sarre and Herzfeld, *Archäologische Reise im Euphrat- und Tigris-Gebiet*, iii, 1911, pl. CXV, 1, 6.

[3] *Samarra*, ii, 4; *Suse*, 11–23 (footnotes).

[4] D. B. Harden in *Iraq*, i, 1934, 124–8.

[5] D. Talbot Rice in *Ars Islamica*, i, 1934, 65–9.

[6] *Bulletin of the Metropolitan Museum of Art*, xxxii, 1937, no. 10, p. 12.

[7] P. Olmer, *Catalogue du Musée Arabe, Caire. Les filtres de gargoulettes*, 1932.

[8] J. Sauvaget, *Poteries syro-mésopotamiennes du XIV^e siècle*, Paris, 1932. Similar wares are reported from Hama: H. Ingholt, *Rapport préliminaire sur la première campagne des fouilles de Hama*, Copenhagen, 1934, 27–34.

[9] Dja'far, *Musée National Syrien*, 10–11, pl. III, 2. Fragments of similar ones mentioned by Ingholt, *loc. cit.*, 29; Dimand, *A Handbook of Mohammedan Decorative Arts*, 1930, 154, fig. 89; Hobson, *A Guide to the Islamic Pottery of the Near East*, 1932, 32, fig. 40.

Coarse red cooking-ware. Large quantities of a thin, hard, purplish-red or brown ware, sometimes with a lead glaze on the inner surface, were found both in the ninth- to tenth-century level and that of the Crusaders' occupation. Many pieces could be completely restored: most of the shapes are shown on pl. XIX, 2 B, and fig. 5. The cooking-pots, with rounded or pointed bottoms and horizontal ribbing, were often blackened by use, as were the open baking-dishes. Water-pots, of the same material, though rather more finely made, bore roughly scratched designs in addition to their three handles and six jangling clay rings suspended

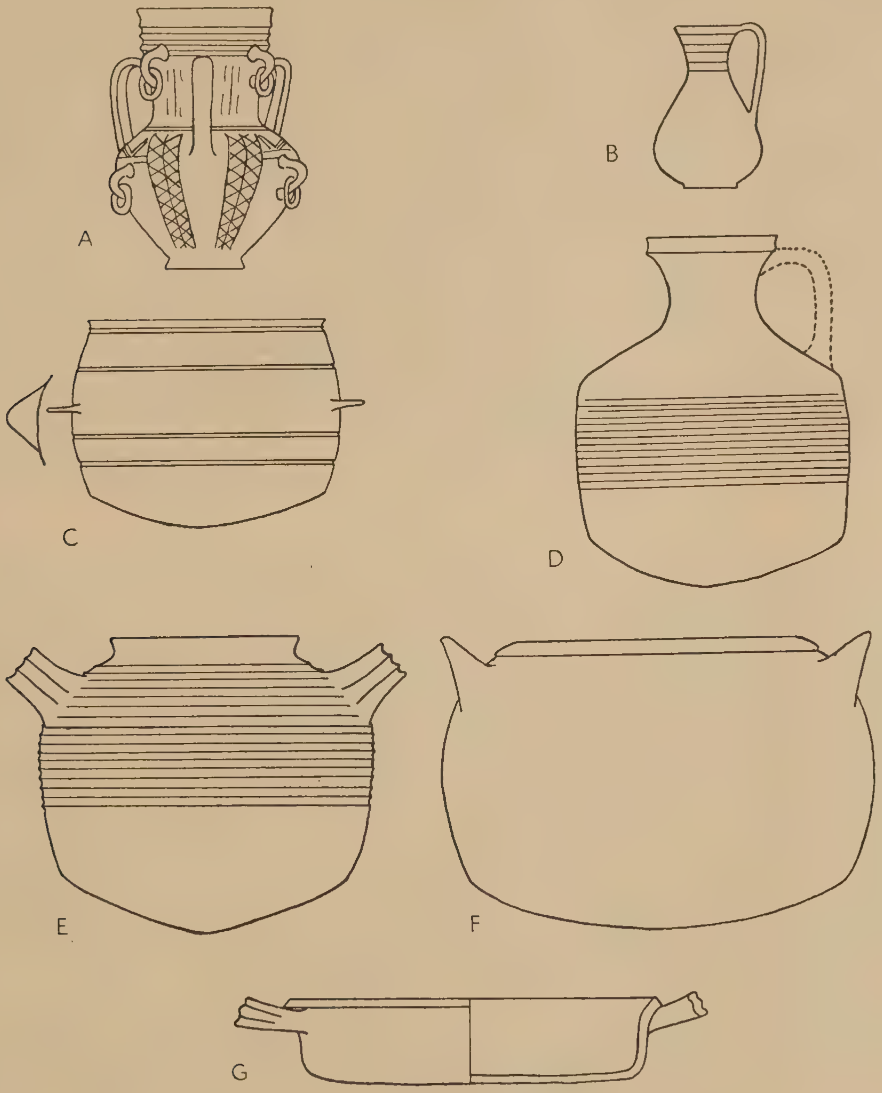

Fig. 5. Coarse red cooking-ware, ninth to tenth century or later

from loops (pl. XIX, 2B); lamps occur in the shapes of fig. 6A, B, C; all forms are common in Egypt. Common ware of this kind must have been made at innumerable places in the Near East, retaining the same utilitarian shapes for centuries. A cooking-pot from Samarra (*Samarra*, ii, no. 82) has the same triangular tab handles as our fig. 5C; closely similar is another pot from Atlit made perhaps four hundred years later;[1] further examples of uncertain date are reported to have been found at Hama.[2]

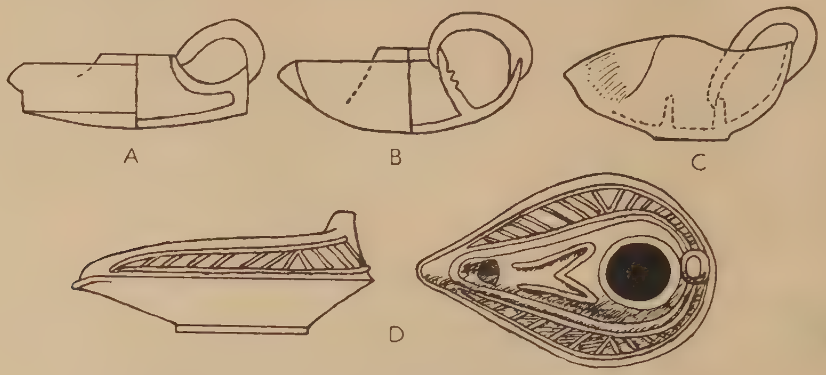

Fig. 6. Lamps A, B, C, coarse red ware; D, unglazed whitish ware. Ninth to tenth century

(c) *Pottery of the Crusaders' period: mainly thirteenth century, before 1268*

Byzantine wares. The Latins of the Fourth Crusade captured Constantinople from the Greeks in 1204, and in their train came the Italian traders. The latter had constantly helped the settlers in Syria to fend off the fleets sent by the Emperor to enforce his claim to a share in the conquered territory, and during the twelfth century their presence at Constantinople could hardly have been welcome even when their object was peaceful trade. Once the Crusaders had seized the capital, however, they became an indispensable means of communication with Europe and the countries of the Christian East. Loot from the Empire was brought back to enrich the cathedral treasuries of Europe, in particular that of St. Mark at Venice; an Arab historian of the Crusades records that some of the spoil was also taken by sea to Egypt and Syria to be sold there.[3] These treasures have disappeared, but objects of less value in the form of pottery were brought with them from Byzantine lands, and have been found on at least two of the sites occupied by the Crusaders.

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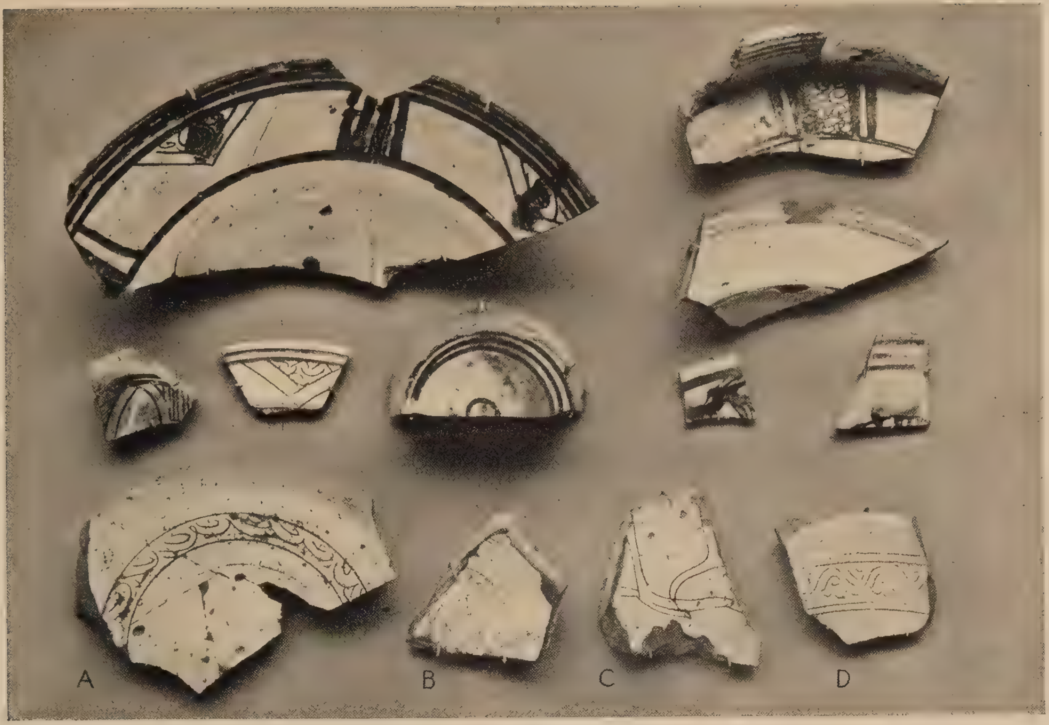
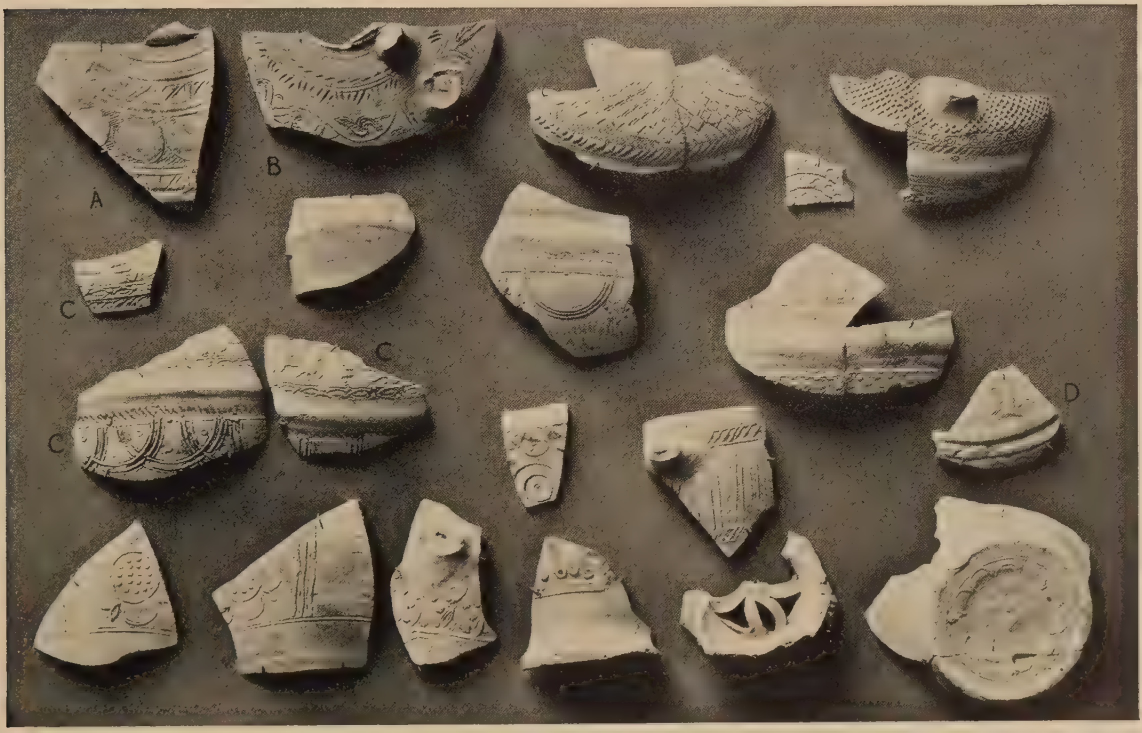
[1] *Palestine Department of Antiquities Quarterly*, iii, 1933–4, pl. LVII, fig. 3.

[2] H. Ingholt, *Rapport préliminaire sur la première campagne des fouilles de Hama*, 1934, 28.

[3] *Recueil des historiens orientaux des croisades*, v, 154. The objects mentioned are marble sculptures taken from the churches; many of these reached Damascus.



1. Byzantine sgraffiato-wares; thirteenth century



2. Fragments of unglazed water-vessels; D, thirteenth century; the rest ninth to tenth century

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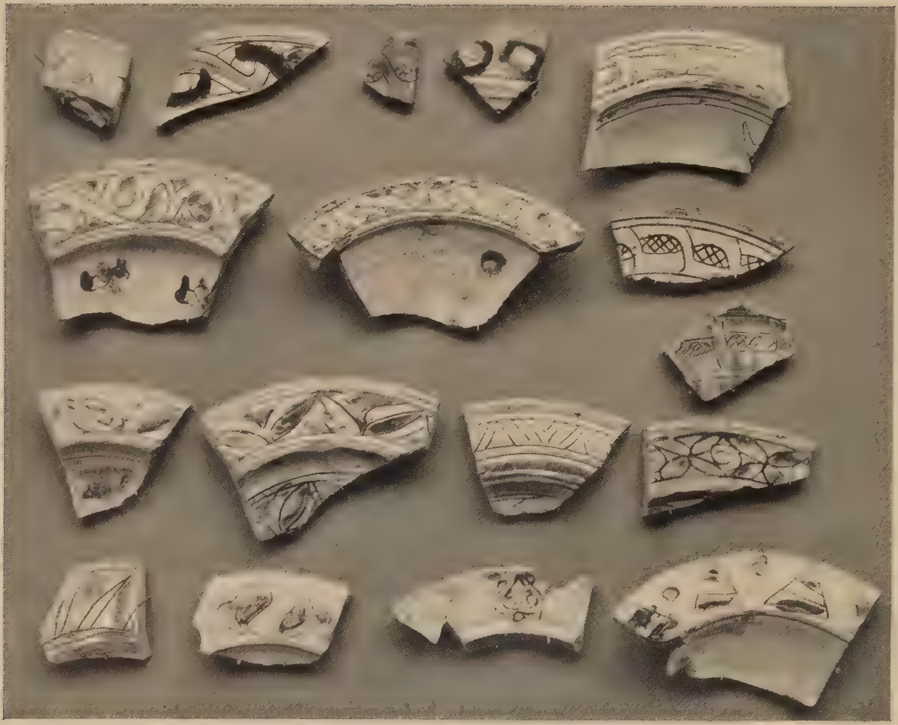
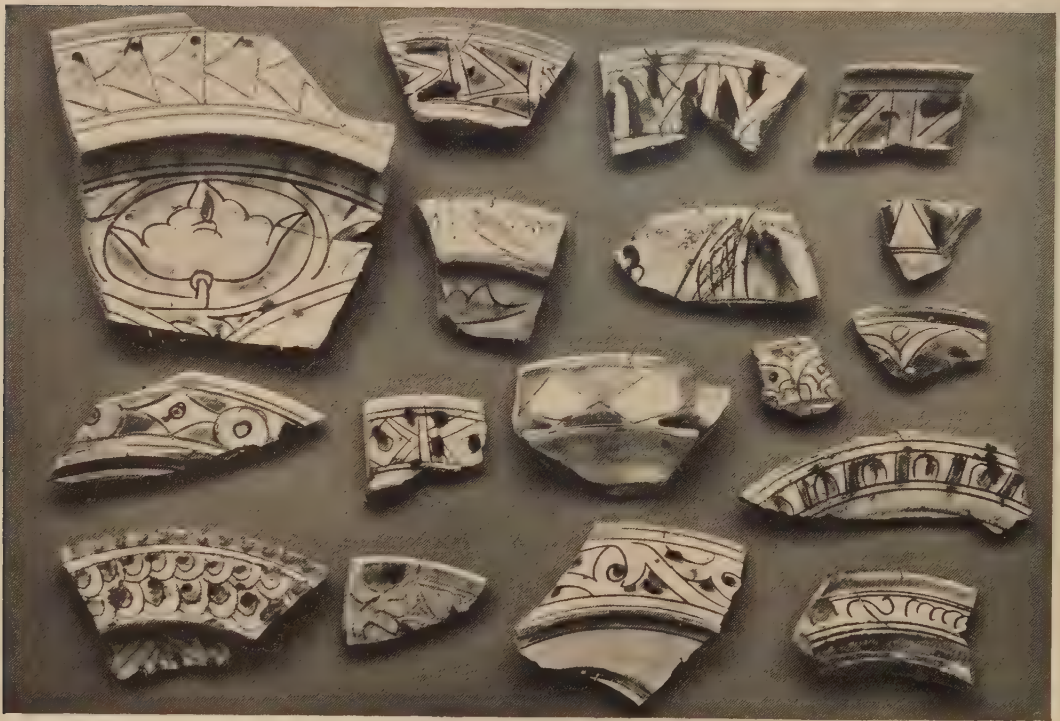


1. Bowl-rims, local sgraffiato-ware; thirteenth century



2. Bowl-rims, local sgraffiato-ware; thirteenth century

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At Al Mina, in the thirteenth-century level, there were a few sherds of that unpleasant white-bodied ware, with a monochrome olive-green or yellowish glaze, that seems to have been a product of Constantinople itself.[1] Commoner were fragments with a red body and white slip decorated in sgraffiato technique; they fall roughly into two classes which may have come from different localities, though the existence of pieces showing the characteristics of both groups combined forbids a dogmatic assertion on this point. The first group, of which examples are shown on pl. xx, 1 A, B, C, D, are thickly potted in fine, hard orange-red clay, and all belong to shallow bowls with a simple lip and low foot-ring. The very thin white slip fails to conceal pits and flaws in the surface; neither the slip, nor the colourless or yellowish glaze, overlaps on to the reverse. The decoration is scratched with a very fine point which hardly penetrates beyond the slip into the body, and usually consists of narrow concentric bands of stylized leaf-pattern; pl. xx, 1 B, C, shows parts of feebly drawn birds that contrast shamefully with the virile renderings by the local potters at Port St. Symeon. Added touches of green or brown are absent on the sherds illustrated, though they occur on pieces in the same style found elsewhere. This finely engraved ware has turned up in Asia Minor, and, in considerable quantity, at Constantinople; in general, however, it appears to have an Aegean distribution, and is particularly well represented on sites in Greece.[2]

The second type of Byzantine sgraffiato-ware found at Al Mina (examples on pl. xx, 1, unlettered) is made of fine, hard purplish-red clay thinly potted. The shapes are bowls with a characteristic high foot, and in some cases a carinated lip (fig. 7). The slip is thicker than that of the finely engraved class; decoration consists mainly of narrow concentric bands cut deeply into the body with a flat gouge, forming some sort of medallion in the middle of the well, and punctuated with groups of radial strokes into panels nearer the lip. The panels contain pendent triangles, scrolls, or small trefoils in medallions, these all incised with a fine point; touches of yellow-brown, and occasionally green, are applied to these patterns. A zigzag or wavy line is sometimes traced in white slip on the clay ground outside the carinated lip. These Al Mina fragments are poor examples of a class that sometimes attains considerable elaboration, particularly in the Black Sea area, where it was probably produced. A complete bowl decorated with a deer among foliage, the background of slip being entirely cut away, was found in the American excavations at Corinth, but must be related to a similar piece found in the Caucasus;[1] both appear to be imitations of the *champlevé* sgraffiato-ware made in the Garous district of western Persia.[2] Another bowl found in south Russia shows a rider done in a style that suggests the influence of Persian lustre or painted pottery; others again, with armed riders, are typically Byzantine.[3] Simpler pieces found in the British Academy excavations at Constantinople have been noticed by Professor Talbot Rice under the rather misleading title 'shiny olive incised ware';[4] Pergamum and Lycia have produced further examples,[5] but this class appears to be rare in Greece in comparison with the finely engraved kind. Down the Asiatic coast it was carried as far as Fostat (examples are in the Victoria and Albert Museum),[6]

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[1] D. Talbot Rice, *Byzantine Glazed Pottery*, 1930, 21, group A 3.

[2] Pergamum, Volbach, *Mittelalterliche Bildwerke aus Italien und Byzanz*, Berlin, 1930, pl. 18; Miletus (?), *loc. cit.*, pl. 17, 6662: Constantinople, Talbot Rice, *op. cit.*, 32 ff., pl. xiii; Samos, *Athenische Mitteilungen*, liv, 1929, 135; Sparta, *Annual of the British School at Athens*, xvii, 1910–11, pls. xv, xvi; Corinth, *American Journal of Archaeology*, 1929, 523; 1930, 443; 1933, 476, 571, etc.; Athens, *Athenische Mitteilungen*, liii, 1928, 181, Beil. xxxviii, and *Hesperia*, ii, 1933, 310 ff., figs. 7–9, 13 g.

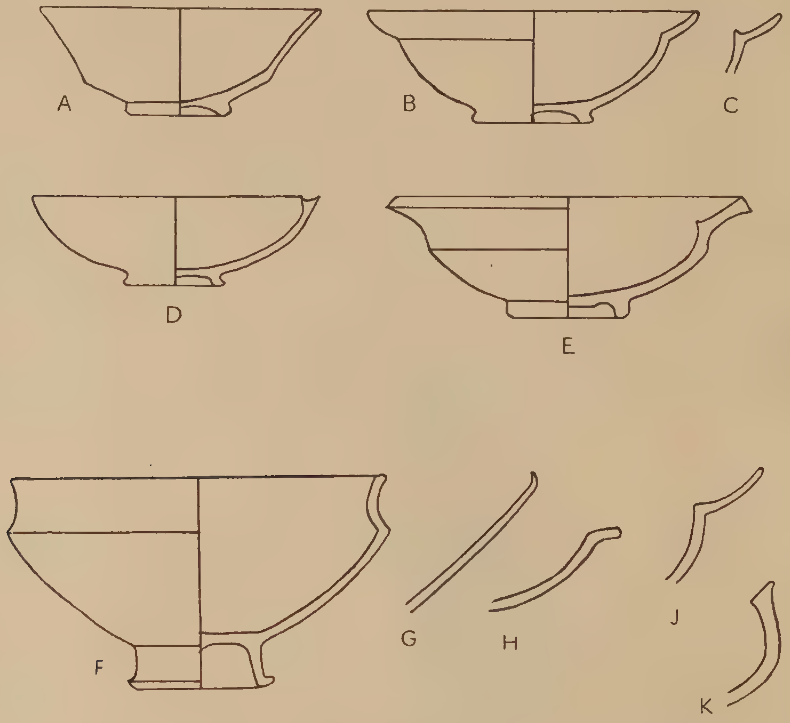

Fig. 7. Thirteenth-century wares: A–E, painted 'Atlit' type; F–J, Byzantine; K, Cypriote

and the Pilgrims' Castle at Atlit provides further evidence for its currency among the Crusaders.[1] I cannot agree with the suggestion made by Mr. Johns in publishing his finds, that the barred medallion in the middle of some of the bowls is a Mameluke heraldic device pointing to an Egyptian origin; the known sgraffiato-ware of the Mameluke period is completely different in style and technique, while the motive in question, or something very near it, is seen on fragments from Byzantine sites where Egyptian connexions are out of the question.[2]

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[1] *American Journal of Archaeology*, xxxiv, 1930, 433, fig. 6 B; Talbot Rice, *op. cit.*, pl. XIX B.

[2] See A. Lane, 'Early Sgraffito Ware of the Near East', in *Transactions of the Oriental Ceramic Society*, 1938.

[3] *Ars Islamica*, iii, 1936, 108, fig. 9. De Bock, 'Poteries vernissées du Caucase et de la Crimée', in *Mémoires de la Soc. des Antiquaires de France*, 56, 1897, 218 ff., nos. 8, 11, 12, 28, 29, 30.

[4] *Preliminary Report upon the Excavations carried out in the Hippodrome of Constantinople in 1927 on behalf of the British Academy*, 34: *Second Report*, etc., 1928, 23, fig. 13.

[5] Pergamum, Volbach, *Mittelalterliche Bildwerke*, etc., pl. 24, 6289, 6290, 6556, and pl. 25, 6306, and pl. 29, 9533, 9559; Lycia, *op. cit.*, pl. 20, no. 565.

[6] Nos. C. 929, 1589–1921.

The small jug illustrated in *Palestine Quarterly*, iii, pl. LVII, 2, is closely related to this second type of sgraffiato-ware, but the decoration, instead of being incised, is trailed on to the dark body in white slip, and then covered with glaze. Two jugs of the same kind were found at Al Mina in 1936 (one in the Antioch Museum, pl. XVIII, 1, the other in the British Museum), and there are several examples from the Hippodrome in the Constantinople Museum.

Yet a fifth type of Byzantine pottery was represented by a few fragments from open bowls of red clay, with patterns painted in purple or brown and green on a white slip. The largest belonged to a bowl with spiral motives in the middle and round the border. Painted wares of this kind, but with a whitish body, have been found in Constantinople and were evidently made there; the red-bodied type has an Aegean distribution, being particularly common on the Greek sites.

Sgraffiato-ware of the Crusading period. The surface soil and higher rubbish-pits produced a great quantity of sgraffiato-ware, of a kind very different from that found lower down in the stratification. It was evidently the pottery most commonly used by the Crusaders. The presence of a few kiln-wasters at Al Mina shows that the ware must have been made on the spot, but it was not intended merely for local use. Exactly similar pottery has been found in excavations at the Pilgrims' Castle, Atlit, at the foot of Mount Carmel in Palestine,[3] whither it was probably conveyed in the Italian merchant ships that traded along the coast. The Pilgrims' Castle was built about 1217, and continuously occupied till the fall of Acre in 1291 made its evacuation necessary; it thus survived Port St. Symeon by twenty-three years. If the sgraffiato-ware found there was imported from Port St. Symeon, it must have been made between 1217, when the castle was built, and 1268, when Port St. Symeon was captured by the Mamelukes. Alternatively, the potters ousted by Baibars in

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[1] C. N. Johns in *Palestine Quarterly*, i, 1931–2, pl. LIII, 1-4, 7; ii, 1933–4, pl. LVI, fig. 1, and p. 139, fig. 2, *g* and *h*.

[2] Compare J. Ebersolt, *Catalogue des poteries byzantines et anatoliennes du Musée de Constantinople*, 1910, nos. 7, 16; H. Wallis, *Byzantine Ceramic Art*, 1907, figs. 27, 32.

[3] C .N. Johns, *Palestine Quarterly*, iii, 1933–4, 139, fig. 2, *e*, *f*, pls. LIV, LV.

1268 may have made their way to Atlit and set up their kilns afresh, producing the same pots with the same patterns till the castle was evacuated. Johns mentions a disused kiln at Atlit,[1] but describes no wasters found in it—in fact it sounds like a typical rubbish-pit into which all sorts of fragments were thrown. Until convinced by further evidence I prefer to regard the Atlit sgraffiato-ware as imported from Al Mina. On the latter site the style and technique of all the fragments is fairly homogeneous, with few of the variations that should mark the development of a fabric over a long period. Of the Crusaders' coins found, the great majority belong to the first half of the thirteenth century,[2] and combining this evidence with that from Atlit, I should suggest that most of the pottery was made between 1200 and 1268. Fragments have, of course, been found at Antioch,[3] but that neighbourhood has also yielded an earlier type of ware with large, stiff engraving and no added colour.[4] This may be the local product of the twelfth century, but not a scrap was found at Al Mina.

The clay body of the 'Port St. Symeon' ware is light orange- or pinkish-red, rather coarse, and hard; the walls of the vessels were for the most part thickly potted. The visible surfaces were covered with a thin white slip, through which the design was engraved in strong, thick lines when the clay was leather-hard. The colouring pigments were then applied in the necessary places, the normal scheme being an alternation of green (from copper oxide) and yellow-brown (iron oxide) with occasional additions of purple (manganese). The whole decorated surface was then covered with a transparent lead glaze which fired to a slightly yellowish tone and absorbed the colours. Very rarely the glaze is stained a monochrome green. The bowls were fired upside down, the spur-marks appearing in the well. The 'wasters' on pl. XXVI, 1,[5] have reached the penultimate stage before the glazing and final firing. The clay is surprisingly hard considering that it can have had only a short preliminary baking to produce the 'biscuit' texture; the design has been incised through the slip, but the latter has overflowed into the engraved lines—perhaps because it was too moist at the time of decoration, more likely because its unfired condition allowed it to dissolve in the dampness of the soil. The metallic oxides used for colour

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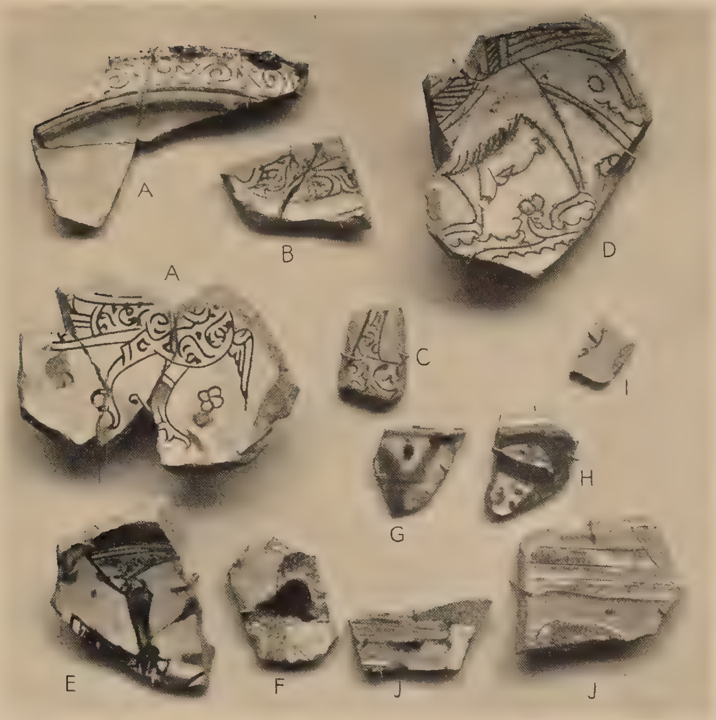
[1] *Palestine Department of Antiquities Quarterly*, iii, 137.

[2] P. 19, above.

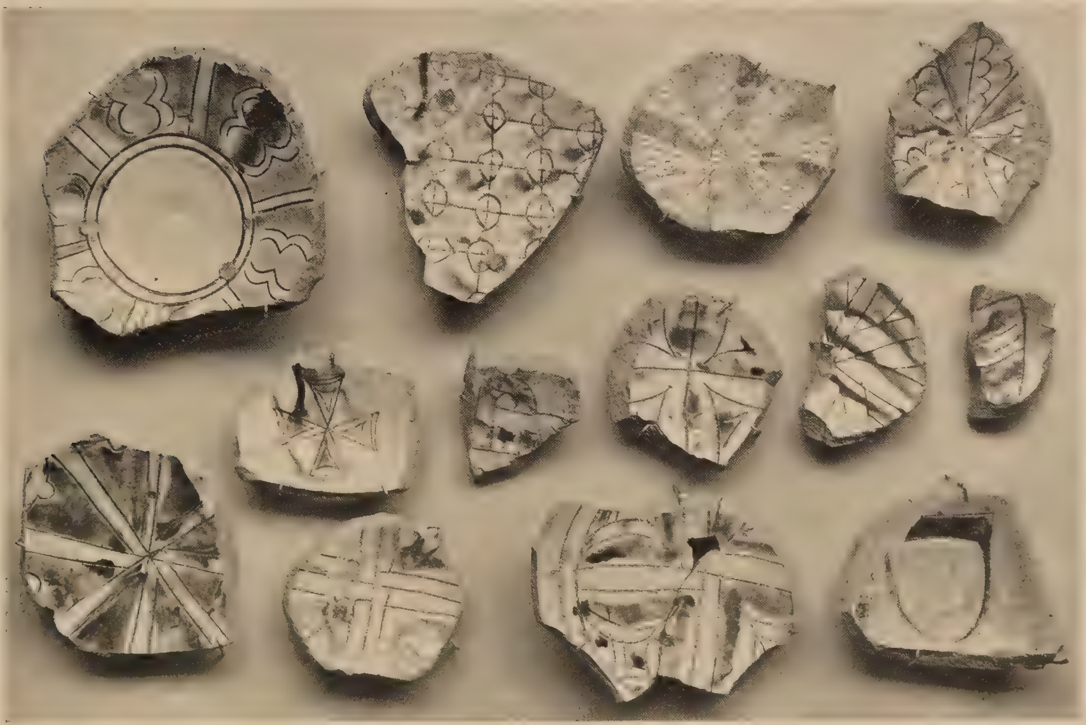
[3] *Antioch-on-the-Orontes*, i; 'The excavations of 1932', ed. G. W. Elderkin, 5, fig. 2, and several fragments on pl. XVI.

[4] Mr. F. O. Waage very kindly showed me the recent finds of the Princeton expedition; his forthcoming publication should contain material of the greatest interest.

[5] These were found on the edge of the site near the modern road; they were not at first recognized as wasters, and we missed the opportunity for unearthing the kilns. The two pieces in the top right and that in the bottom right corners of pl. XXVI, 1, are from finished bowls showing the same patterns as the rest, which are all unfired. Pl. XXI, 1, top left, may also be a waster, with part of another bowl adhering.



1. A–F, local sgraffiato-ware; G, Persian or Rakka 'lakabi'-ware; H, I, maiolica from Faenza; JJ, north Italian sgraffiato-ware



2. Bowl-centres, local sgraffiato-ware; thirteenth century

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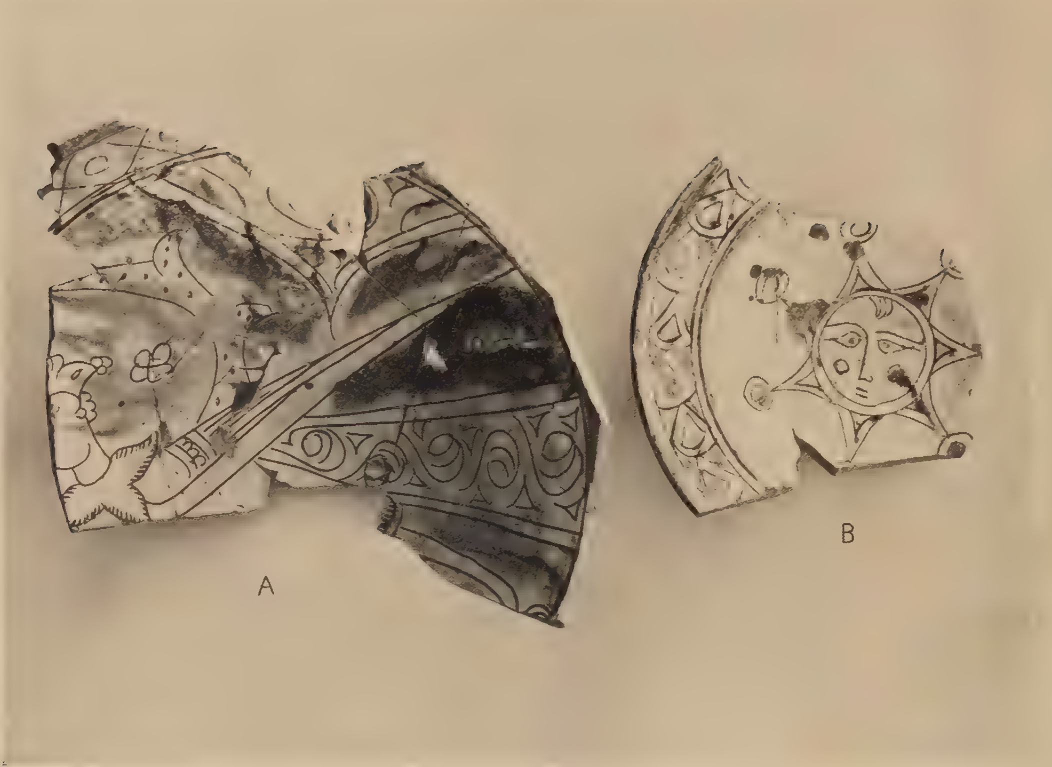
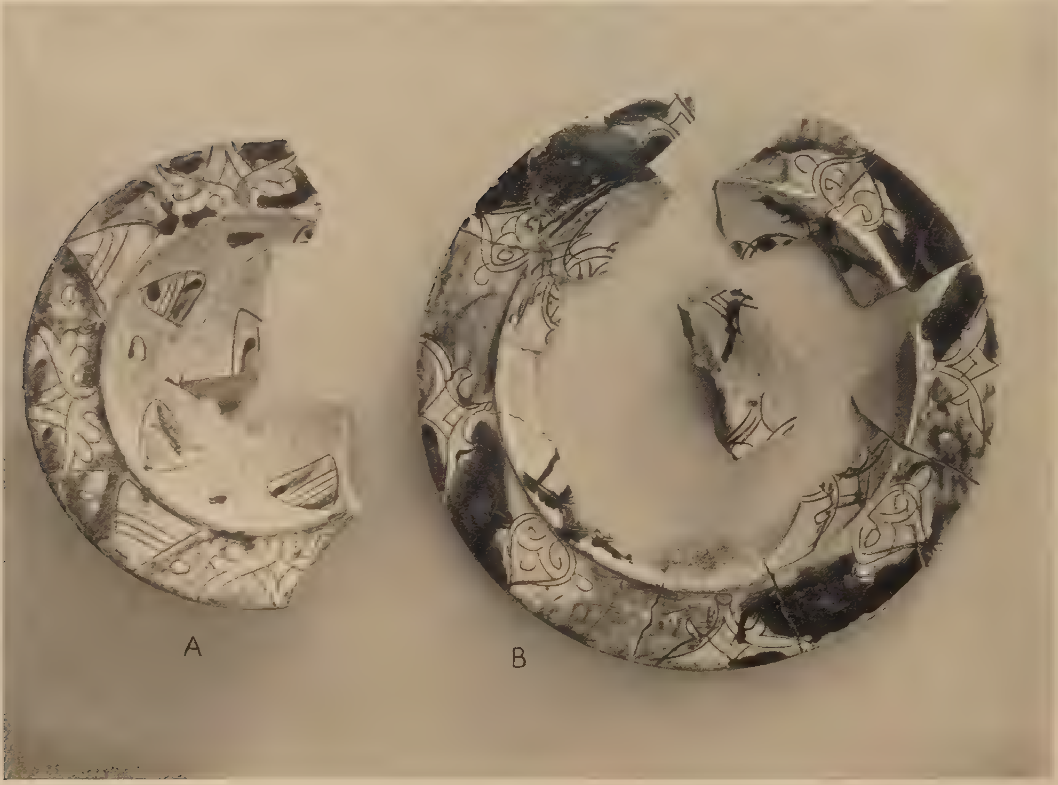


1. Local sgraffiato-ware; thirteenth century



2. Local sgraffiato-ware; thirteenth century

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appear as a powdery deposit which has partly rubbed off; the copper oxide, which should eventually show green, is here dull blue-green; the iron oxide (for yellow-brown) is red; the manganese (for purple) is greyish purple.[1] The potters were economical with slip and glaze, only applying them to the most visible parts of the pot; on bowls such as fig. 8 A, B, E, they barely overlap the rim on to the reverse, which is otherwise unglazed, and on bowls like fig. 8, C, D, F, J, glaze and slip on the exterior do not reach below the 'elbow'. The rule is broken in the case of the bowl with a bird of Byzantine style, pl. XXII, 1 AA; here a glaze and slip of excellent quality cover the outside almost down to the foot-ring, and so they do on a few other pieces of the same kind. I should reckon these examples to be the earliest we found, dating from the end of the twelfth or very beginning of the thirteenth century. A proportion of the sgraffiato-ware, amounting to perhaps a third, was of greatly inferior quality to

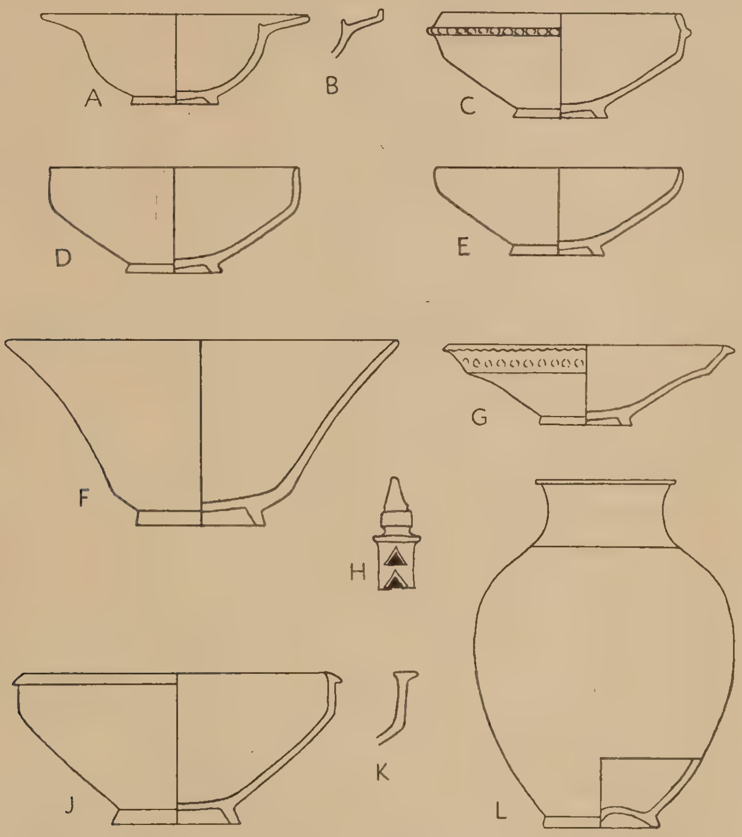

Fig. 8. Local 'Port St. Symeon' sgraffiato-ware; thirteenth century

the rest; the walls were flimsier, the clay harder, the glaze much yellower, and the designs, though identical, were very carelessly drawn. A peculiarity of shape found in much of the second-class ware was the crinkled lip of the bowls (fig. 8 C); otherwise the forms are the same, and I have no doubt that ware of both qualities was made contemporaneously.

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[1] I am indebted to Dr. D. V. Thompson, of the Courtauld Institute of Art, for his kindness in making a scientific analysis of these fragments.

The shapes are shown in fig. 8. The commonest and most characteristic is the shallow bowl with a flat lip (fig. 8 A); at the inner edge of the lip a small raised ridge[1] is present in every case except for the early bowl (pl. XXII, 1 AA) which also has fluted sides. Occasionally there is another raised ridge at the outer edge of the lip (as on the bowl from Pisa, pl. XXVI, 2; fig. 8 B), and in the pieces of second-class quality this outer edge is crinkled (pl. XXI, 2). Next in frequency are the larger bowls with vertical lip and bevelled rim (fig. 8 J); these show glaze and slip on the outside as far down as the 'elbow', sometimes with sgraffiato patterns.[2] Sometimes the outside of the lip bears applied bosses, limpet-shaped or moulded as human masks (pl. XXVII, 1 A–G).[3] The other bowls illustrated occur less frequently. Those like fig. 8 D (pl. XXVII, 1 H, 1 M) can be distinguished from their Cypriote contemporaries by the absence of the straight bevel inside the lip (see p. 53) as well as differences in technique and drawing; the glaze and slip do not reach beneath the 'elbow'. The jar, fig. 8 L, was almost complete,[4] but only the one example was found. Two objects of cylindrical shape, with triangular holes cut through the walls (fig. 8 H) might have been whistles (?) or have served as handle-knobs. The objects on pl. XXVIII, 2, are rectangular tiles, about 2·5 cm. thick and roughly finished; there are keying marks on the back, but no traces of mortar to show that they had been let into a wall.

In decoration there is a strong preference for an arrangement of ornament in concentric bands. The flat lip of the common bowl (fig. 8 A) and the inner vertical surface of the larger pieces (fig. 8 J) receive a border-pattern kept in its place by pairs of parallel lines. The individual patterns collected on pl. XXI or shown on the more complete bowls are mostly based on the cable and leaf-ribbon[5] or simple geometric forms, but triangular shields (pl. XXIII, 2 A) and pseudo-Kufic inscriptions (pl. XXVI, 1, top row) show respectively the Western and Eastern elements that have been merged in the style. Alternate leaves or circles are coloured brown and green, a monotonous counterchange only varied when purple makes its rare appearance. The well of the bowl is treated in a variety of ways: pl. XXII, 2, shows a selection of bases with simple radiating patterns, but these often become more complicated when cone-shaped motives splay outwards from a central interlacement (pls. XXIV, 1 B; XXV, 3). The concentric-band principle may be transferred here from the rim (pl. XXV, 4), or a central object such as shield or sun-face (pl. XXIII, 1 B, 2) may have others radiating from it. The potter is not afraid of leaving plenty ofsp ace without decoration—to the advantage of his boldly outlined patterns; in this he may be contrasted with the Cypriote, who often covers his whole field with elaborate decoration on a 'scribble-hatched' background.

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[1] This ridge occurs on the imitations of Chinese sgraffiato-ware found at Samarra (*Samarra*, ii, figs. 144, 150, 151) and also occasionally on Cypriote bowls of the Lusignan period; it is seen once on the 'Atlit' painted ware (fig. 7 C). But on twelfth- to thirteenth-century ware in general its appearance is a strong point in favour of manufacture at Al Mina.

[2] Compare *Palestine Quarterly*, iii, pl. LIV, fig. 2, and p. 139, fig. 2 F.

[3] The same feature is often found on the Lusignan pottery of Cyprus. A fragment found at Al Mina in 1936, with a human mask, has been erroneously attributed to the sixth to seventh century by R. L. Hobson, *British Museum Quarterly*, xi, 3, 1937, 115.

[4] Ht. 25 cm.

[5] This pattern (as pl. XXI, 1, third row left) occurs also on Persian 'minai' and on Rakka wares, and possibly there is some connexion here. Compare Meyer-Riefstahl, *Parish-Watson Collection*,

More interesting than the purely ornamental patterns are the numerous figures of birds, animals, monsters, and humans. These usually occupied the whole of the well with a few small filling motives—quatrefoils, notched leaves or inset triangles in the field, and it is only by exception that anything more than a naïve attempt is made to adapt the subject to the space. The drawing is often grotesque (*Antiq. Journ.*, xvii, pl. II, fig. 2), but never so feeble as on much contemporary Byzantine pottery.[1] It is clear that many of the simpler border-patterns were invented by the unsophisticated potters, but the running border on pl. XXIV, 1 B, is common in Byzantine art, and a similar influence is apparent in the tightly drawn bird of pl. XXII, 1 AA. The fantastic birds develop a more individual style, perhaps in the hands of Arab draughtsmen; one specimen has between its legs an Arabic inscription declaring its identity as a 'parrot' (pl. XXII, 1 D; p. 78, no. 6; pl. XXV, 1). A well-preserved bowl with a bird on it, acquired by the Victoria and Albert Museum in 1936 (pl. XXVI, 3), can now be with certainty identified as a product of the Port St. Symeon kilns. The tail is sometimes drawn out long, with elaborate patterns on it, and many of the birds become fabulous creatures with human heads (pl. XXIII, 1 A). The siren or harpy is not uncommon in Byzantine art, but as the *simurgh* of Mazdaic theology a similar creature had established itself in the mythology of the Near East.[2] The creature on pl. XXIII, 1 A, is wearing an odd three-pointed collar for which I can find no parallels elsewhere[3]—it may have been invented to balance the three-

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fig. 34; *Amtliche Berichte*, xlviii, 1927, title-page. The pattern of three humps on the rim of the last-mentioned bowl, very commonly found on Rakka pottery, is also to be seen on the Port St. Symeon ware (*Palestine Quarterly*, iii, pl. LV, 3, 4).

[1] Cf. Volbach, *Mittelalterliche Bildwerke aus Italien u. Byzanz* (Berlin, 1930), pl. 17, 6662.

[2] See article in the *Encyclopaedia of Islam*, 'Simurgh'.

[3] It is present in a less pronounced form on the human figures, pl. XXIV, 1 A, and Ingholt, *Rapport . . . Hama*, pl. X, 2. Numerous fragments were found at Al Mina with parts of similar collars,

cornered hat. The latter, found also with the collar, on the excellent sphinx-bowl brought back to the British Museum in 1936,[1] was a Seljuk fashion current in the thirteenth century and also surviving later.[2] The sphinx itself was probably derived at Al Mina from Eastern sources—it appears, for example, on the damascened bronzes attributed to Mosul and on the so-called 'lakabi' pottery attributed to Rakka or north-west Persia.[3] The remaining pieces with animal figures were too small to be worth reproducing; they included part of a bowl with a lively figure of a galloping horse, evidently without a rider. The oriental element is most marked in the small bowl with a squatting human figure, of indeterminate sex (pl. XXIV, 1 A). The personage wears a turban, a collar resembling a bow-tie, a short caftan, and trousers; round the arm is bound an ornamental ribbon (*Tiraz*). The beaker raised in the right hand is of a shape common in the Syrian enamelled glass, of which fragments were found on the site,[4] and the object to the right is shown to have been a wine-bottle by comparison with a closely similar bowl found at Hama.[5] The conventional attitude is one common in paintings on the enamelled glass made about this time at Aleppo.[6] Two more fragments from similar subjects are shown on pl. XXII, 1 E, F (turned sideways in the photograph). The imitation Kufic inscriptions which frequently appear have been deformed beyond hope of recognition, as on the sgraffiato-ware made in the Byzantine Empire,[7] but this decorative treatment is usual even in purely Islamic work.

The occidental contribution to the subject-matter is curiously lacking in Christian symbolism, though the cross is sometimes found in the bottom of bowls (pl. XXII, 2). Triangular shields of Western shape are very common, occupying the middle of the bowl or disposed round the well and border; sometimes they

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but none could be made up. Sphinxes in Near Eastern art often have something round their necks; on a twelfth- to thirteenth-century Mesopotamian mirror a necklace (Meyer-Riefstahl, *The Parish-Watson Collection of Mohammedan Potteries*, 1922, fig. 40); on a Persian 'minai' bowl, a sort of ruff (*op. cit.*, fig. 43).

[1] *Antiq. Journ.*, xvii, pl. II; R. L. Hobson in *British Museum Quarterly*, xi, 1937, 116, and *Ars Islamica*, iv, 1937, 193, fig. 1. Shape as fig. 8 E.

[2] F. Sarre, *Seldschukische Kleinkunst*, 1909, pl. I (stone reliefs with winged genii, from Konia) and fig. 21 (sphinxes on stone relief from Konia); C. Lamm, *Mittelalterliche Gläser und Steinschnittarbeiten aus dem nahen Osten*, 1929, pl. 112, 16 (Syrian enamelled glass); Meyer-Riefstahl, *op. cit.*, fig. 38 (fourteenth-century bronze candlestick): *Münchener Jahrbuch der bildenden Kunst*, 1907, 23, fig. 8 (fifteenth-century MS).

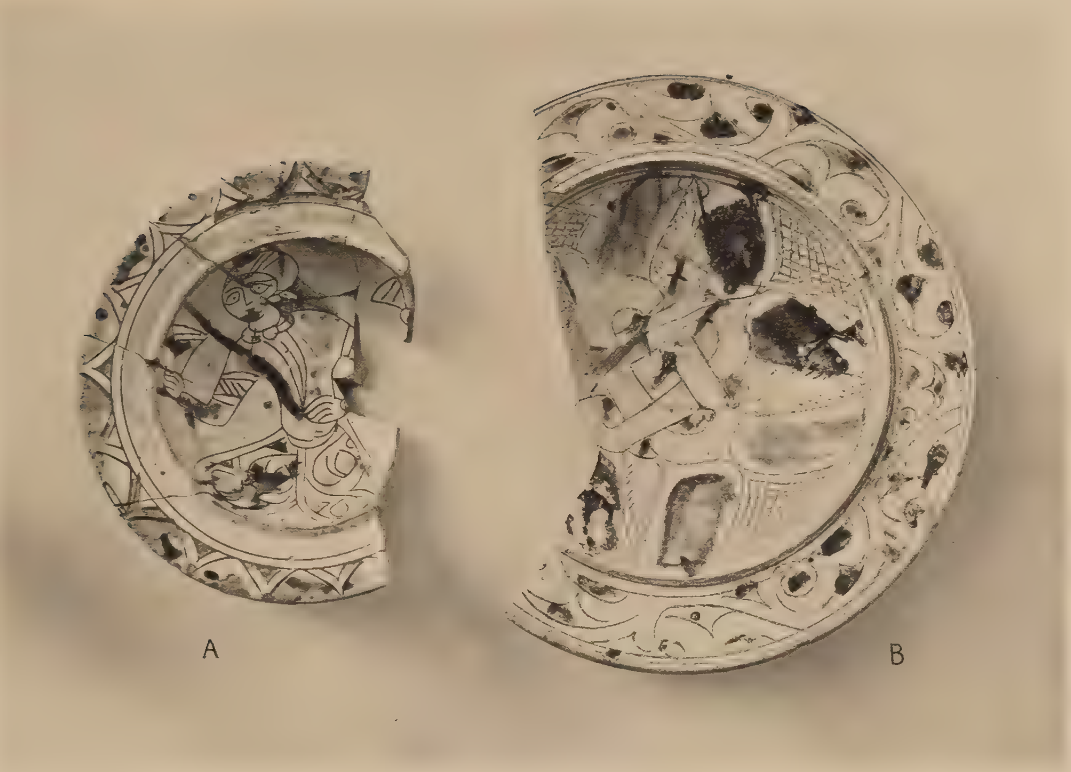
[3] F. Sarre, 'Das Metallbecken des Atabeks Lulu' in *Münchener Jahrbuch*, 1907, 19, fig. 1. R. L. Hobson, *Catalogue of the George Eumorfopoulos Collection*, vi, pl. LXI, F. 386.

[4] P. 73.

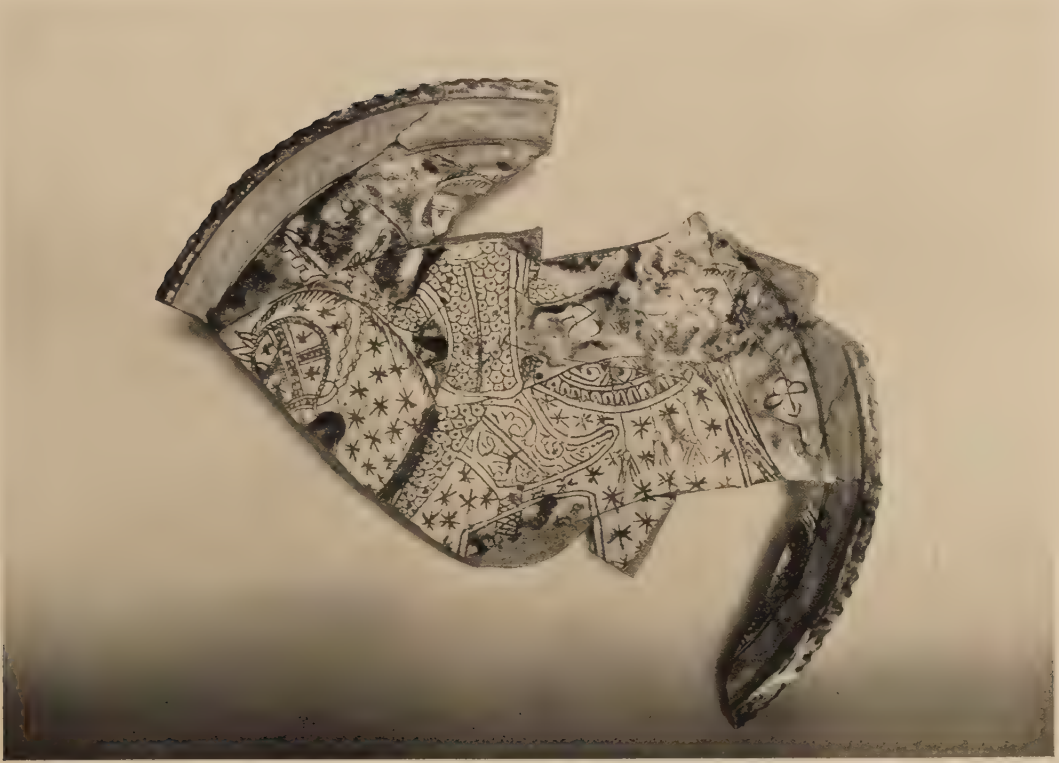
[5] H. Ingholt, *Rapp. prél. de la première campagne des fouilles de Hama*, 1934, pl. X, 2, p. 36. Shape evidently as fig. 8 J. For the bottle, see Lamm, *Mittelalterliche Gläser*, pl. 140.

[6] Cf. *ibid.*, pls. 121, 17; 127, 4, 5, etc.

[7] D. Talbot Rice, *Byzantine Glazed Pottery*, 1030, pl. XIII.



1. Local sgraffiato-ware; thirteenth century



2. Local sgraffiato-ware with a figure of a Crusader; thirteenth century (Antioch Museum)

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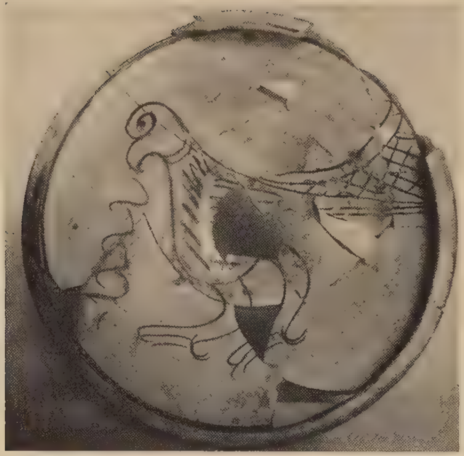

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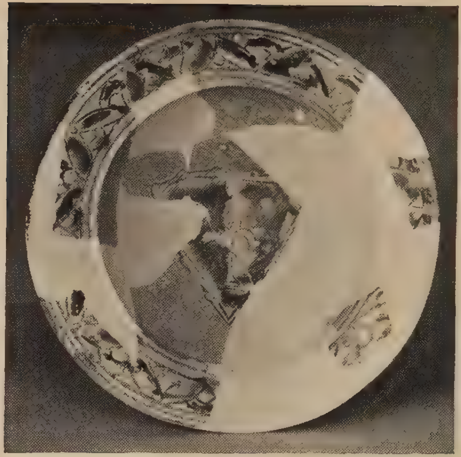

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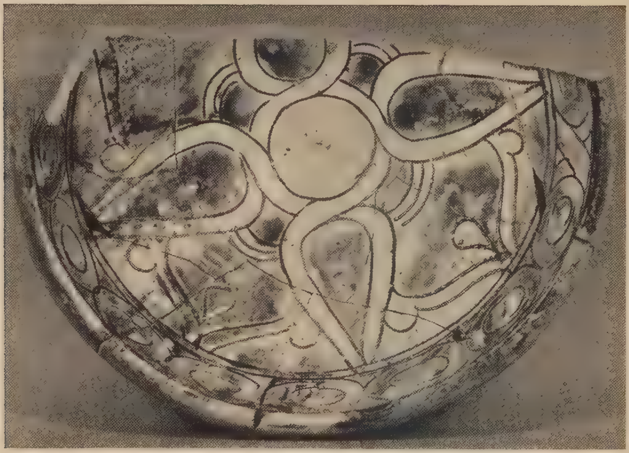

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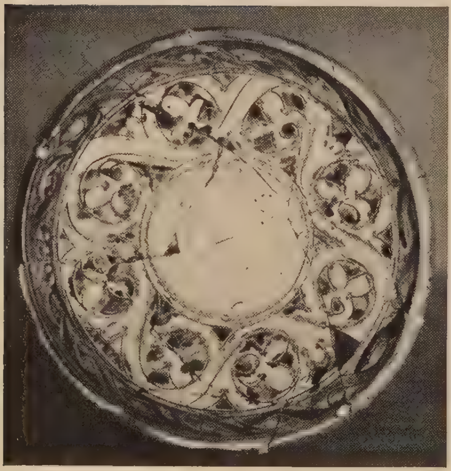

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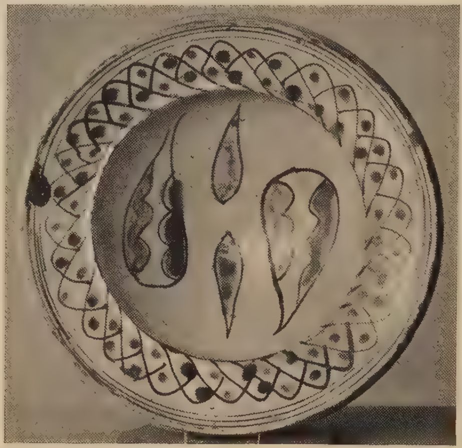

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1–4. Local sgraffiato-ware bowls; thirteenth century (3, 4, Antioch Museum)

5. Painted bowl of 'Atlit' type from a church tower at Pisa; thirteenth century (Victoria and Albert Museum)

Published by the Society of Antiquaries of London, 1938

have a feathered fringe and one is charged with a fleur-de-lis on a field per pale brown and green (pls. XXIII, 2A; XXV, 2; *Palestine Quarterly*, iii, pl. LV, 1–4). Most of the shields are divided by a fesse into areas of brown and green, and I do not think that any attempt has been made to render the arms of particular individuals.[1] The triangular shield evidently caught the fancy of the neighbouring peoples, for a bowl in Berlin, made at Rakka, shows a horseman armed with it and with the straight sword also carried by the Christians.[2] The fragmentary bowl on pl. XXIV, 2, contains a mounted figure which is surely intended to represent a Crusader.[3] He is clothed in chain-mail with *hauberk* and *chausses*, brandishes a sword (missing) in his left hand, but has no helmet or shield; from behind him appear the ends of his scabbard and, probably, the handle of his dagger. The horse is draped in starred 'housings', with a green shoulder-band, a saddle-cloth, and an ornamental strap over the hindquarters with tassels.[4] In the field are a fleur-de-lis and minor filling ornaments. The style of drawing is painstaking but dull, lacking the calligraphic rhythms to be seen in the Berlin Rakka bowl and a sgraffiato bowl in the British Museum from the same region.[5] The artist was perhaps an Arab; he must have been interested by the European trappings of the horse, so inappropriate to the climate.

Our excavations have given a good idea of the 'Port St. Symeon' ware of the thirteenth century; whether the factory existed in the twelfth we do not know, but it is probable that the Princeton expedition will throw light on the wares made in the Antioch neighbourhood during the early years of Latin occupation. In the pottery I have described Byzantine influence plays little part; the makers were probably native Syrians (the only legible inscription is in Arabic), and supplements to their own invention were mainly drawn from the Islamic hinterland. Sgraffiato-ware was still being made in the region of the Upper Euphrates—examples are the British Museum rider and the fish bowl in Berlin from Deir al Zor[6]—and though this has little relation in style, it would seem to have influenced the coastal potters in their technique. The use of green, brown, and purple colouring in conjunction with an engraved design had begun at Samarra in the ninth century and become a firmly rooted tradition in the Islamic lands of the nearer East, whereas the sgraffiato-ware of the Byzantine and Aegean districts favoured a monochrome colour-scheme almost up till the time of the Ottoman conquest.[1] Sgraffiato-ware became a characteristic product in Italy during the fourteenth and fifteenth centuries, making considerable show of auxiliary colour, and if the link could be established, we might regard it as a continuation of the Samarra tradition handed on through the 'Mediterranean wares' such as those of Port St. Symeon and Cyprus.

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[1] Johns quotes identifications suggested by Mr. A. Van de Put, *Palestine Quarterly*, iii, 139–40.

[2] *Amtliche Berichte*, xlviii, 1927, title-page, and p. 8. The triangular shield also occurs on the Cypriote sgraffiato-ware, brandished by ill-drawn pedestrian warriors or incorporated in the design.

[3] Diam. 29 cm.; shape as fig. 8J. The outside covered with slip and glaze, coloured green, reaching half-way down. Inside, the horse and rider are left white, the background being patched with brown and green.

[4] Compare the horses in a thirteenth-century French MS. *A Book of Old Testament Illustrations in the Pierpont Morgan Library, New York*, text by S. C. Cockerell, M. R. James, C. J. ffoulkes (Roxburghe Club, 1927), pp. 141–2, and illustrations 20–2, 87, etc.

[5] Hobson, *Guide to the Islamic Pottery*, p. 31, fig. 39. For a contemporary Byzantine treament of a similar subject, see *Mémoires de la Soc. Nat. des Antiquaires de France*, 1897, p. 213, fig. 8 (sgraffiato-ware).

[6] R. L. Hobson, *Guide to the Islamic Pottery*, p. 31, fig. 9 (from near Aleppo); Sarre and Herzfeld, *Arch. Reise im Euphrat- und Tigris-Gebiet*, 1911, iii, pl. CXIII, 6. A large bowl from north Syria in the

The 'Port St. Symeon' ware has been found in quantity at Atlit in Palestine, and Johns mentions the discovery of sgraffiato fragments at 'Ajlun in Trans-Jordan and at Tell el 'Ujul near Gaza[2]—though until these are published we cannot be sure that they are of the same origin. Eastwards, well within Saracen territory, it appears at Hama on the Upper Orontes,[3] while to the north it is included among the fragments from Korykos and elsewhere in Cilicia.[4] Hobson has already suggested that it inspired the better-known sgraffiato-wares of the Lusignan period in Cyprus,[5] though when I examined the fragments from local excavations in the museum at Nicosia I saw none that could with certainty be attributed to the Al Mina kilns. Nevertheless we may expect them to turn up in future excavations on the island, for the discovery of Cypriote fragments at Al Mina and on the sites in Cilicia[6] shows that an interchange of pottery was taking place with the Asiatic coast. The trade in these waters was carried on almost exclusively by Italian ships, which would naturally call at other Levantine ports on their way home; thus we may expect that fragments of Port St. Symeon ware will be found at Corinth, together with the painted 'Atlit' ware which has already been reported from the Peloponnese.[7] As a final link in the chain we have two bowls from Pisa itself, whose merchant fleet played such a prominent part in the Eastern trade. The bowl on pl. XXVI, 2, acquired by the Victoria and Albert Museum in 1871, was formerly built into a church tower at Pisa; it is of the shape shown in fig. 8A, B, and there can be no doubt that it is 'Port

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Damascus Museum probably belongs here (conventional plant decoration). For the relation of these pieces to the carved ware with added colours, see Lane, 'Early Sgraffito Ware of the Near East', in *Transactions of the Oriental Ceramic Society*, 1938.

[1] See Lane, *op. cit.*

[2] *Palestine Quarterly*, iii, 141.

[3] Ingholt, *Rapp. prél. de la première campagne des fouilles de Hama*, 1934, pl. x, 2.

[4] *Monumenta Asiae Minoris Antiqua*, ii, 1930; Herzfeld and Guyer, *Meriamlik und Korykos*, fig. 207, J9491, 9494 a, b, 9495, 9500, 9507. A bowl from Gözlü Kule, Tarsus, in *Amer. Journ. of Arch.*, xxxix, 1935, p. 548, fig. 44.

[5] *British Museum Quarterly*, xi, 1937, 116; *Ars Islamica*, iv, 1937, 193.

[6] *Monumenta Asiae Minoris*, ii, fig. 205, J2509, 9511, 9512, 9514; fig. 207, J9497. The other fragments cannot be certainly identified from the illustrations alone.

[7] See p. 54.

St. Symeon' ware. Its companion, of similar provenance, is mentioned on p. 57, and belongs to a subdivision of the painted 'Atlit' class.

Cypriote sgraffiato-ware. The sgraffiato pottery found in medieval graves in Cyprus has long been on the market, and there are good examples in the chief English museums. Hardly anything has been written about it,[1] but it is usually recognized as a local type of 'Byzantine' ware made during the thirteenth and fourteenth centuries. After the first campaign at Al Mina Mr. Hobson expressed a view that the sgraffiato-ware found in Cyprus must have been imported from Syria; later he modified this so far as to allow that the ware was made in the island but under strong influence from the 'senior' fabric on the mainland.

The Cyprus Museum at Nicosia contains complete and fragmentary specimens of which some at least were found in controlled excavations, and it is hoped that in future discoveries it will be possible to date the pottery from associated material such as coins. In the collection are some pieces of true 'Byzantine' type which may have been imported from the Aegean area[2]—perhaps at the beginning of the Lusignan period (1192–1475) or even before; then comes the local sgraffiato-ware, usually coloured with brown and green, and lastly the sgraffiato-ware imported from Italy in the later fifteenth and the sixteenth centuries.[3] I was surprised to find that none of the fragments could with certainty be attributed to the Port St. Symeon kilns; seen in quantity, the island ware leaves a completely different impression. The clay is practically the same in appearance, but the glaze is thicker, with a glossy and often iridescent surface; it tends to cover the whole exterior of the bowls instead of stopping short below the lip. The commonest shape is the bowl with turned-in lip, something like the Port St. Symeon type of fig. 8 D, but usually distinguished from it by the straight bevel on the inside (fig. 7 K). The bowl with flattened rim (fig. 8 A) is in Cyprus an uncommon shape, and, when it occurs, usually lacks the characteristic ridge at the inner border. The foot-ring tends to be more pronounced and is often drawn out into a knopped stem or pillar;[4] notched horizontal ridges and applied limpet-shaped bosses play a more prominent part than in Syria. The engraved decoration is done with a finer point and the crowded patterns lack the bold simplicity found at Port St. Symeon; often they spread all over the surface on a background darkened by scribbled shading. The figures which so often occur wear Byzantine or European dress—knights brandishing sword and shield, ladies with long dresses and plaited hair holding a cup, wedded couples affectionately intertwined.[1] There can be no doubt that the ware continued in use for a long period, for the decadent types illustrated in *Cyprus Report 2*, 1934, pls. XI, 5, XII, 3, 4, are dated by coins of the fifteenth to seventeenth centuries.

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[1] R. L. Hobson, *Guide to the Islamic Pottery*, 1932, pp. 28–30, figs. 37, 38; *British Museum Quarterly*, xi, 3, 1937, p. 116; *Ars Islamica*, iv, 193; D. Talbot Rice, *Byzantine Glazed Pottery*, 1930 (see index); J. du P. Taylor, *Cyprus Dept. of Antiq. Reports*, 2, 1934, pp. 24–5, pls. XI, XII; 3, 1935, p. 34, pl. XII. Miss Taylor is preparing a comprehensive study of the material.

[2] *Cyprus Report*, 2, 1934, pl. X, 4. Related in technique to the class described on p. 43.

[3] *Ibid.*, 2, 1934, pls. X, 3; XII, 2. I cannot agree with Miss Taylor's attribution. The first should be sixteenth-century Italian—cf. G. Baroni, *Ceramiche italiane minori del Castello Sforzesco*, Milan, 1934, pp. 144–7, etc. For the second, compare *op. cit.*, p. 381, no. 538 (attrib. to Treviso). There is a good deal of Italian maiolica in the Cyprus Museum—mostly dating after 1489, when Venetian rule began, but imported from the central as well as north Italian factories.

[4] Cf. Talbot Rice, *Byzantine Glazed Pottery*, 1930, p. 57, fig. 311; R. L. Hobson, *Guide to the Islamic Pottery*, 1932, fig. 38; *Cyprus Report*, 2, 1934, pl. XI, 1.

Future excavation in Cyprus will surely bring to light wares imported from Port St. Symeon, for a trade connexion is established by the presence of definitely Cypriote fragments on that site. These include the knopped stem and two fragments, pl. XXVII, 1 J, K, L, and others with the characteristic 'scribble-hatched' ground. They indicate that the Cypriote wares were already being made before Port St. Symeon was abandoned in 1268. The ware has also turned up on the Cilician sites of Meriamlik and Korykos,[2] but the pieces that have come into the Constantinople market were probably taken there from the island in modern times. To sum up, the Cypriote sgraffiato is a thoroughly provincial ware, developing on its own lines without much influence from outside; the style is Byzantine in its affinities, but the liberal use of added green and brown colour was adopted through contact with the Asiatic coast (probably at Port St. Symeon), where this combination of colours and engraving had become a widespread tradition since its first appearance at Samarra.

Painted ware of the thirteenth century. In the *Palestine Department of Antiquities Quarterly* for 1933–4 (pp. 137 ff.), Mr. C. N. Johns published a number of fragmentary painted bowls which had been discovered in excavations at the Pilgrims' Castle, Atlit. The type was hitherto unknown, and Johns suggested that it might be the product of a factory situated somewhere in Asia Minor. Mr. F. O. Waage, who was then working on the material found in excavations by the American School at Corinth, at once recognized that many of the Corinth fragments must be of the same fabric as the painted wares of Atlit. He had already noticed their similarity to the archaic Italian maiolica, and when he published them he suggested that they and the Atlit fragments were made in a Near Eastern factory which actually supplied the models from which Italian

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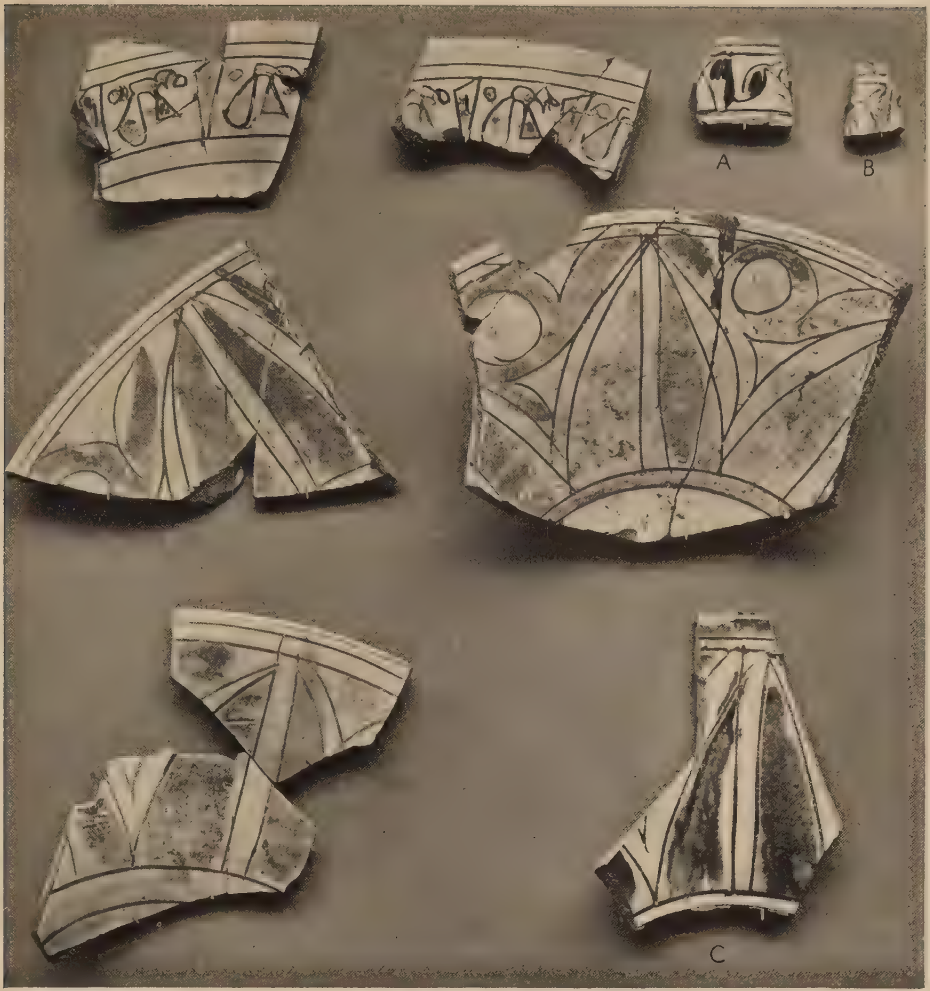
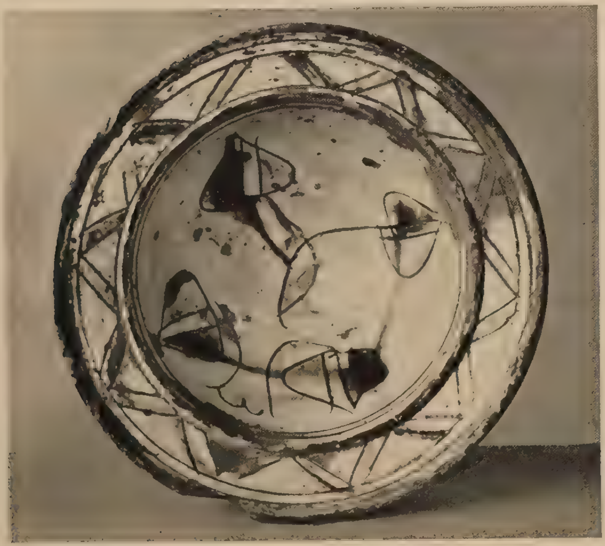
[1] *Cyprus Report*, 3, 1935, pl. XII, 3; Victoria and Albert Museum, *Review of Principal Acquisitions*, 1933, pl. 6 a. The dresses are hardly detailed enough to act as a guide for dating, though women usually wear the same sort of coiffure and clothes as on the icon dated 1356 (Rice, Gunnis, and Rice, *The Icons of Cyprus*, 1937, pl. 1). One bowl in Nicosia shows a man with a wide hat like that in fig. 20 of the same work (mid-fifteenth century).

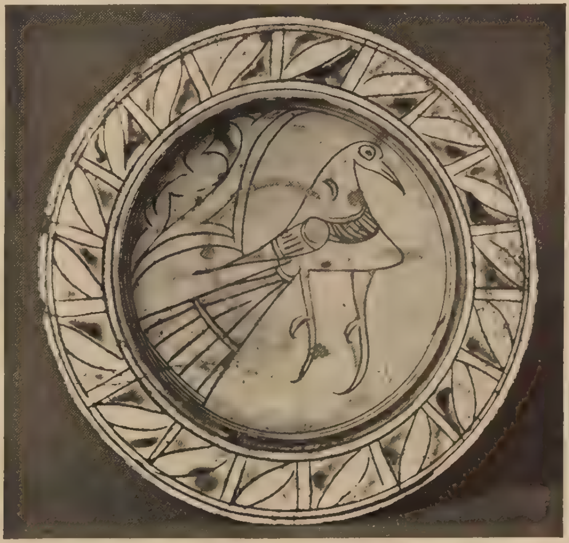
[2] *Monumenta Asiae Minoris Antiqua*, ii, 1930; Herzfeld and Guyer, *Meriamlik und Korykos*, fig. 205, J 9509–12, 207, J 9497.



1. Kiln wasters of local sgraffiato-ware, and three fragments from completed bowls (A–C); thirteenth century



2. Bowl of Port St. Symeon sgraffiato-ware from a church tower at Pisa; thirteenth century (Victoria and Albert Museum)



3. Bowl of Port St. Symeon sgraffiato-ware in the Victoria and Albert Museum; thirteenth century

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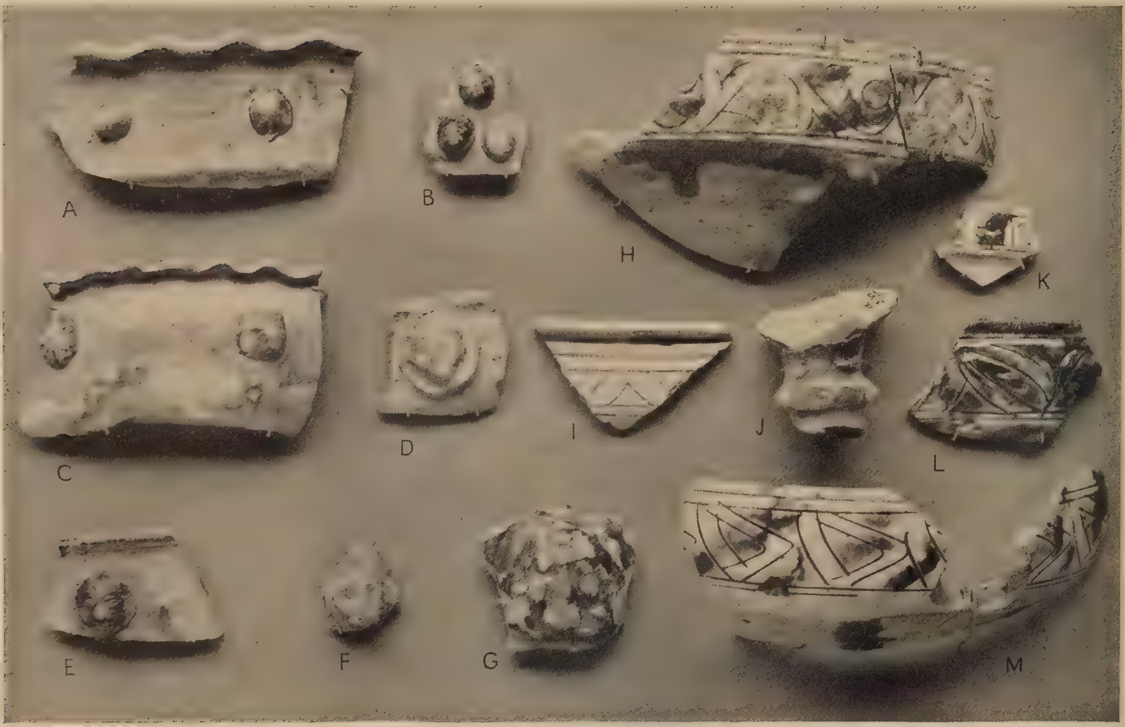
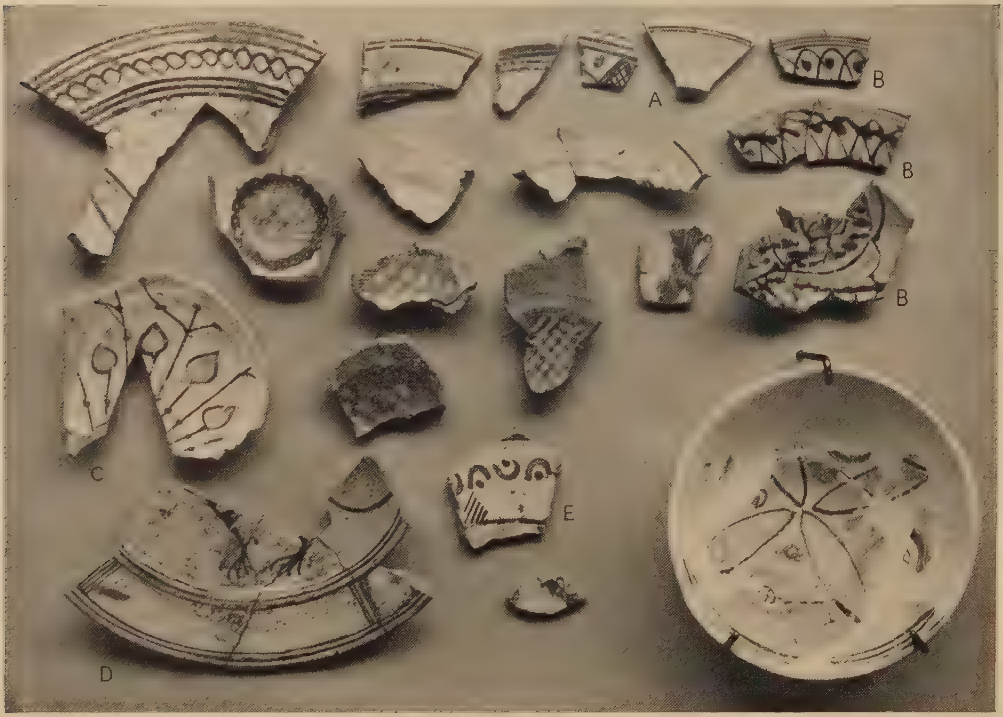


1. A–I, M, local sgraffiato-ware; J, K, L, Cypriote sgraffiato-ware; thirteenth century



2. Painted ware of 'Atlit' type; thirteenth century

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maiolica developed. The connecting link between East and West was provided by the returning Crusaders, who brought with them examples of the ware to be copied by the Italian potters. There could be no question of influence in the opposite direction, as the twelfth- and thirteenth-century coins found with the Atlit sherds proved them to be earlier in date than any of the kindred wares in Italy. Waage concluded that the 'Atlit ware' was certainly Near Eastern, and perhaps made in the Aegean area.

The finds at Atlit and Corinth are now supplemented by further fragments from Al Mina. The sherds were not numerous, and lay in the same level as the thirteenth-century sgraffiato-ware; the most important pieces are shown on pl. XXVII, 2, and the shapes in fig. 7 A–E. With one exception, the clay is yellowish white, soft, and sandy, sometimes inclining to pink in the break. A very thin coat of opaque white tin enamel covers the inside of the bowls, just overlapping the outside of the lip; the design is outlined in a thick brown or purplish pigment (manganese) painted over the enamel, parts being filled in with a wash of pale cobalt blue. The third colour is a pale olive green, thickly applied. Red and orange, mentioned in connexion with the Atlit sherds, occur on only one fragment at Al Mina. Dr. D. V. Thompson, of the Courtauld Institute of Art, has kindly verified by analysis the presence of tin oxide in the enamel, which shows a tendency to decay and rub off in the form of powder, bringing the paint with it. Of the shapes shown on fig. 7, A, B, and D correspond with those drawn by Johns and Waage for their own material, but C (= pl. XXVII, 2A) is new; it has a raised ridge at the inner edge of the lip—a feature common in the Port St. Symeon sgraffiato-ware. The designs shown on pl. XXVII, 2, are mostly repetitions of those illustrated by Johns and Waage; D shows the feet of a bird, E part of a fish, C a new plant pattern.

The three fragments, pl. XXVII, 2 BBB, come from a bowl which differs in shape and technique from the rest. The clay is pink in the break and pale yellow on the exposed surface of the reverse, a peculiarity to be observed in unglazed Syrian pottery of all periods; it is, moreover, hard and well fired. The white enamel on the inside was analysed by Dr. Thompson and found to be the same in composition as that of the white-bodied fragments, but the design is done in dark brown outline with spots of copper green and pale yellow ochre. A precisely similar bowl was published by Johns on his pl. LIII, 2, and a rim-fragment by Waage in his fig. 5, no. 2. These pieces show a conscious attempt to imitate the appearance of sgraffiato-ware like that made at Al Mina in a painted medium; it is probable, but by no means certain, that they came from the same workshop as the white-bodied ware.

It is worth recording the other places where these two kinds of painted pottery have come to light. I saw among Dr. Ingholt's finds at Hama a white-bodied bowl similar to Waage's fig. 3, no. 1. Mr. A. H. Megaw informs me that he saw similar bowls built into medieval church walls at Merbaka in the Argolid and at Gastouni in Elis (Peloponnese). The bowl with a lion in M. Koechlin's collection, illustrated in Butler's *Islamic Pottery*, pl. xxxix, 1, is evidently of the white-bodied ware, but the provenance given is quite conjectural. A bowl painted with an armed warrior, from the Castello di Lucera in South Italy, is illustrated in *Faenza*, xxv, 1937, pl. xv *a*, and this is almost certainly 'Atlit' ware, though no confirmatory description is given in the text. In *Rassegna d'Arte*, xv, 1915, 105, E. Mauceri illustrates a jar and a bowl (figs. 9, 10) which are again probably 'Atlit' ware, though his description omits to mention the all-important colour of the clay. The jar would be the first example of a closed pot in this fabric. In the same article, fig. 3, is illustrated a bowl-rim like that on our pl. xxvii, 2 BBB, and a fragment of a closed pot with the same pattern—presumably of the red-bodied variety. It is possible that the fish in the same figure is of the white-bodied Atlit type. That Near Eastern pottery of other kinds was reaching Sicily is shown by the Cypriote sgraffiato-ware bowl in Mauceri's fig. 11. Our pl. xxv, 5, represents a bowl in the Victoria and Albert Museum acquired in 1871; it is said to have been built into a church tower at Pisa, like the Port St. Symeon bowl on pl. xxvi, 2. It corresponds exactly in technique and shape with the fragments on pl. xxvii, 2 BBB; its profile is shown in fig. 7 E. An extraordinary 'polychrome' bowl discovered at Taranto is illustrated in *Faenza*, xxiii, 1935, pl. viii, and bears a similar interlaced pattern round the border, but I should hardly dare to say that it was of the same fabric without seeing it. A remarkable feature on this bowl is the round Islamic-looking shield.

The 'Atlit' ware is thus found in the Holy Land, Greece, Italy, and Sicily. Its date falls within the period when the Pilgrims' Castle was occupied by the Crusaders—1217–91; the pieces found at Port St. Symeon must have reached there before the Crusaders were expelled in 1268. No development of style or improvement of the rather poor technique is perceptible in the existing material, which suggests that it cannot have been produced over a long period; we might propose a date round about the middle of the thirteenth century. The most important question is, where was it made? Dr. Liverani, in a learned article in *Faenza*, xxv, 1937, 3 ff., observed that pottery with painting in green and purple on a white ground is a technique that has appeared at different places round the Mediterranean at various dates from the ninth century onwards. Whether the tradition was continuous, or whether it was evolved independently at successive points, we are not in a position to say. There is the evidence of apparently experimental pieces to suggest that the potters of Orvieto worked out their own technique, and their documentary records go back as far as 1295; moreover, the recent discoveries at various places in south Italy bear witness to the ceramic activity of that region at a date probably at least as early as the thirteenth century. Liverani, therefore, does not exclude the possibility that the 'Atlit' ware was actually exported to the Near East from Italy, for fragments of the green and purple Orvieto type have been found at Fostat (*loc. cit.*, pl. IV *c*), and though probably of fourteenth-century date, these show that Italy could give as well as receive. Finally, he inclines to the view that the 'Atlit' ware was almost certainly of Eastern origin.

The bowl on pl. XXV, 5, was built into a church tower at Pisa—an honour accorded to most of the rare pieces of oriental pottery that found their way to Italy; it is significant that the other bowl on pl. XXVI, 2, which occupied a similar position, was undoubtedly made at the kilns of Port St. Symeon. Neither is very striking as a work of art, nor would they glitter in the sun like the Fatimid lustre bowls used so often as architectural decoration on Italian churches. They must, therefore, have been placed in their conspicuous position because they were regarded as rarities, brought from somewhere more remote than a provincial factory in south Italy. The same arguments against a local manufacture might be used for the painted 'Atlit'-ware bowls built into churches in the Peloponnese, and if we look farther east, we may at once rule out Asia Minor as a possible origin because no fragments of this type have been discovered on the Anatolian sites or in Constantinople. There remain Palestine and Syria, where they appear in three places in the company of sgraffiato-ware undoubtedly produced at the Crusaders' Port St. Symeon. At Port St. Symeon itself they formed a very small proportion of the pottery found; it is, therefore, unlikely that they were made in that neighbourhood. At Atlit they were relatively common, and though this place was of strategic rather than commercial importance, it is not impossible that the painted ware was produced there. But other places on the coast remain unexplored, among them Tripolis, which remained in Latin occupation till 1189 and enjoyed a flourishing trade. Its claim seems a very reasonable one.

In style and technique the painted ware has no Near Eastern relatives, unless we admit a superficial resemblance between the red-bodied type and the Port St. Symeon sgraffiato-ware. The latter, as we have seen, is technically like certain products of north Mesopotamia; its pedigree goes back to Samarra, and its decoration owes much to the contemporary art of the Islamic hinterland. Moreover, we have the evidence of a single Arabic inscription that native Syrians were employed at the factory. The painted ware, on the other hand, is technically so poor and so odd that it appears as an oafish interloper in a country where good pottery had long been familiar. The use of tin enamel is the only lesson it has learnt from its Eastern neighbours; the designs owe nothing to Egypt or Rakka and are completely unsophisticated. Two of the rare figures that occur are women wearing long European dresses (Johns's pl. XLIX, 1, and a similar piece in the Victoria and Albert Museum), while a third is a warrior (a Crusader!) with the European straight sword and triangular shield (*Faenza*, XXV, 1937, pl. XV). There are close analogies in the sgraffiato-ware of Lusignan Cyprus. We are led to the conclusion that if this ware was made in the Near East, the potters must have been European settlers—probably Italians, considering the great part played by that race in contemporary trade. Their position in a state continually at war isolated them from contact with craftsmen who, in Saracen territory, had inherited an ancient ceramic and decorative tradition. When they eventually fled before the triumphant advance of the Saracens, they were unable to find on their return to Europe the materials in which they were accustomed to work; consequently the 'Atlit' ware is without descendants—to use Liverani's happy expression, a 'sort of parenthesis' in ceramic history. For it is essentially a polychrome ware, distinguished by its use of blue in place of copper green; the main body of Italian archaic maiolica, as exemplified in the Orvieto pottery, restricts itself to the two colours of copper green and manganese. Until a generally accepted convention was evolved, there were bound to be short-lived experimental fabrics, and of these the 'Atlit' ware was evidently not the first. The fragments found at the Castello di Monte Leone in Calabria (*Faenza*, XXII, 1934, pp. 35 ff.) are also polychrome in decoration and look more archaic still; the half-moon borders recall the successive employment of this motive in the lustre pottery of Mesopotamia, Fostat, and Rayy, while the interlacing knot-patterns are closely related to the designs on Byzantine sgraffiato-ware. It remains for the Italian students to unearth yet more material to vindicate the ingenuity of those early pioneers who started the great native maiolica tradition.

Rakka ware. The splendid pottery found at Rakka[1] on the Upper Euphrates is well known from the numerous examples sold into Western collections. The place was sacked by the Mongols in 1259, and by 1321 was an uninhabited mass of ruins. It is, therefore, probable that the best of the local pottery was made before 1259. Responsible excavations on the site were undertaken by Makridi Bey for the Constantinople Museum (in 1909) and by M. Eustache de Lorey (in 1926), but though much valuable material was found, including 'wasters', no attempt was made to publish it. Most of the painted pottery shows strong affinities with the Fatimid wares of Egypt, and presumably dates from the twelfth to thirteenth centuries; it is not unlikely that the technique of painting in lustre was introduced here, as apparently also in Persia, by potters who emigrated from Egypt after the fall of the Fatimid dynasty in 1170.

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[1] See Sarre and Herzfeld, *Archäologische Reise im Euphrat- und Tigris-Gebiet*, i, 156 ff., iv, 20 ff.; F. Sarre, 'Drei Meisterwerke syrischer Keramik', in *Amtliche Berichte*, xlviii, 1927, pp. 1 ff.; F. Kouchakji, 'Glory of er-Rakka Pottery', in *International Studio*, March 1925.

There was very little Rakka ware among the finds at Al Mina. The fragments included the remains of a straight-sided bowl painted with black arabesques under a turquoise glaze; part of a bowl in similar technique with a flat rim, bordered with a wavy line and a meander, and the bases of two others painted in black and blue under a clear siliceous glaze. A squat, neckless jar, much broken, was covered with large black spots on a white ground. There was one piece painted in the typical Rakka purplish-brown lustre, and a few with a monochrome turquoise glaze. These were all found in association with the sgraffiato-ware and coins which date from about 1200 to 1268.

The uncommon type of pottery known in the trade as 'lakabi' ware is thought to have been made in western Persia and also at Rakka, where a kiln with wasters was discovered by M. De Lorey in 1926.[1] A waster from Fostat in the Victoria and Albert Museum[2] shows that a closely analogous ware was made in Egypt as well, and the diffusion of the type may have been due to the migration of Egyptian artists that evidently followed the cutting off of Fatimid patronage. One fragment of this ware was found at Al Mina (pl. XXII, 1 G) coming from the lip of a cylindrical beaker. The clay is white, granular, and hard—more compact than the usual Rakka body; the decoration is in a rich blue with a spot of purple, strokes of both colours alternating inside the edge of the lip. Two shallow grooves are scored round the outside. No doubt the lower walls of the vessel bore carved patterns of animals enhanced by touches of colour—a beaker shown by Sir Ernest Debenham at the London Exhibition of Persian Art in 1931[3] might be suggested as a parallel. The date of this pottery has been disputed, some authorities putting it back as far as the tenth century;[4] the later twelfth and thirteenth seem more likely on grounds of style, and though no conclusions could be drawn from the position of a single fragment on a disturbed site, the Al Mina piece probably belongs to the thirteenth-century occupation rather than to that of the ninth to tenth century. One other piece in the same carved technique was found, this time coloured in light blue monochrome. It was too small to allow the pattern to be read. The provenance of these two fragments is in favour of Rakka rather than the more distant Persia as their origin; they have not the glassy alkaline glaze of the Egyptian ware.

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[1] C. Vignier, 'Notes sur la céramique persane', in *Rev. des arts asiatiques*, ii, 1935. See also R. L. Hobson, 'A Dish of Rakka Pottery', in *British Museum Quarterly*, vii, 1932, p. 49; A. Lane, 'Early Sgraffito Ware of the Near East', in *Transactions of the Oriental Ceramic Society*, 1938.

[2] Illustrated by Lane, *loc. cit.*

[3] Catalogue 98 A.

[4] A. U. Pope, in *Art Bulletin*, xiv, 1932, p. 379.

Egyptian ware of the Ayyubid period. Saladin, who overthrew the Fatimid dynasty of Egypt in 1171, was a man noted for his austere tastes,[1] and among the luxuries banished by him from court use was apparently lustre-pottery. It has been plausibly suggested that the potters who possessed the technical knowledge of making the lustre-ware emigrated, some to various places in Persia, some perhaps to Rakka in north Mesopotamia, and some to Moorish Spain.[2] At any rate the technique died out in Egypt itself, and a small group of bowls painted with rather dull patterns in manganese purple on a white ground probably represents a feeble attempt to imitate the appearance of lustre-ware in an inferior material.[3] One of these pieces, dating presumably from the late twelfth century, was found at Al Mina (fig. 9, made up from fragments). The clay is coarse, hard, light red, and thinly potted. The white slip is very thin but covered the inside and most of the outside; the glaze which covered the purple design has decayed. Another instance of this ware being imported into Syria is the fragment illustrated by F. Sarre, *Keramik und andere Kleinfunde der islamischen Zeit von Baalbek*, 1925, p. 14, fig. 43.

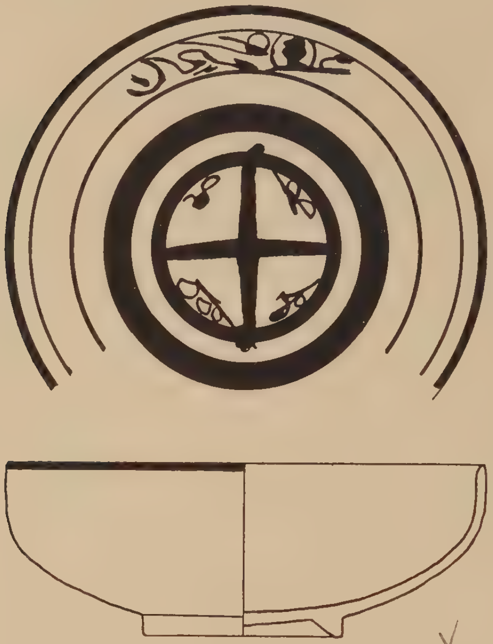

Fig. 9. Egyptian pottery bowl of the Ayyubid period

Italian and later wares. Al Mina appears to have lost all importance after its capture by the Mamelukes in 1268. Not a scrap of Egyptian glazed or sgraffiato-ware of Mameluke type was found, but a few fragments of later pottery had been dropped on the site. Part of a maiolica bowl-rim painted in blue, yellow, and orange, resembles wasters found in excavations at Faenza in central Italy (pl. xxii, 1 h). A complete specimen of the same type is illustrated in Mr. Bernard Rackham's *Catalogue of Italian Maiolica* in the Victoria and Albert Museum, no. 239, and is there dated about 1520. The fragment on pl. xxii, 1 i, is painted in dark blue, yellow, and orange-brown on a light blue ground—a palette characteristic of the Casa Pirota factory at Faenza. Pl. xxii, 1 jj, came from a single bowl with an undetermined design in the sgraffiato technique; a good deal of the ground is cut away, and alternate bands are painted in yellow-brown and a dull inky blue. A splendid plaque showing the Virgin and Child between SS. Roch and John, with the same cut-away ground, was formerly built into a house at Padua, and now rests in the Museo Civico of that city. Other fragments of a similar kind have been found at Padua and on the shore of the Venetian lagoon, and we may accept the evidence produced by Moschetti for their Paduan origin.[1] The Venetian trade-expansion in the Levant during the sixteenth century was responsible for the distribution of this class of sgraffiato-ware in the eastern Mediterranean—it has been found in some quantity in Cyprus, and at Athens a fine bowl, with a bust portrait of a doge,[2] has recently come to light in the Agora excavations.

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[1] Aly Bey Bahgat, *La céram. Mus. de l'Égypte*, 1930, p. 66.

[2] *Idem, op. cit.*, pp. 66–7.

[3] Examples, Bahgat, *op. cit.*, pls. xxx, 4, 9, 10, 11, xxxi; *La Céramique égyptienne de l'époque musulmane*, 1922, pls. 56, 57.

There were a few fragments of definitely Turkish pottery on the Al Mina site; some, painted in brown on a white slip with stylized plant designs, were closely similar to the wares made at Chanak Kalé on the Dardanelles in the eighteenth and nineteenth centuries.[3] Others were bowls decorated with blotches and streams of white slip under a clear green glaze—a kind of pottery still made to-day in many parts of the Near East. They may have been dropped by the local farmer at any time in the last two hundred years.

Glass

The glass found during the excavations was in very poor condition owing to breakage and decay, only a few small perfume-bottles surviving complete. As with the pottery, the disturbed nature of the site meant that dating based on stratification could not be applied to isolated fragments without reserve; in assigning a few pieces to the late Roman period, I have been guided by their style rather than the circumstances of their discovery. It is, however, quite certain that the greater part of the glass lay in one level, together with the early sgraffiato- and lustre-ware of the Abbasid period, and the occurrence of a few types, also found at Samarra, further justifies the proposal for it of a date during the hundred odd years from 850 to 968. One rubbish-pit in the square E 2 on the working plan contained a mass of broken fragments which must have been thrown in at the same time, and as these included some specimens of types which were found at the Mesopotamian capital, it serves to establish the contemporaneity of others which were not. In the following discussion the relevant pieces will be noted as coming from the 'E 2 hoard'. There was very little glass in the highest level, that of the Crusaders' occupation, but one important fragment, that with 'Zwischengold' decoration, only just fails to be unique, while others bore enamel and gold painting in the styles that Lamm attributes to Aleppo and Damascus. I may add that the conclusions to be drawn from stratification, such as they are, confirm the dates already proposed by Lamm for similar material.[1]

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[1] See A. Moschetti, 'Della ceramica graffita padovana', series of articles in *Padova*, 1931, esp. p. 174, and L. Conton, *Ceramiche veneziane dei secoli XIV e XV pescate di recente in laguna*, 1929, facing pp. 14, 18. Other examples illustrated by T. Borenius, *Catalogue of a collection of maiolica belonging to Henry Harris*, 1930, pls. II *a*, III *a*.

[2] I am indebted to Miss A. Frantz for a photograph and description of this bowl.

[3] Th. Bossert, *Peasant Art in Europe*, 1927, pl. LXXIII, esp. no. 11.

The drawings of shapes were done from actual specimens, most of which are now in the Victoria and Albert Museum. The forms have been completed when the surviving fragments made them quite certain; in one or two cases restorations are suggested with dotted lines.

(a) *Late Roman period*

During the first two or three centuries of the Roman Empire the glass-houses of Syria and Egypt supplied the whole Mediterranean area. To-day great quantities of Roman glass are found all over Syria in furtive excavations by the peasants; but at Al Mina the history of the site warned us not to expect much material of this date. The most productive period for glass was probably over by the fifth century, and the standard of Imperial taste that overlay all branches of art in the first two or three centuries of the Christian era had broken down in favour of a popular art often characterized by grotesque and clumsy forms. The cultural phase that intervenes between the best years of the Empire and the reaffirmation of a courtly taste in the national art of Islam is well illustrated in the Coptic crafts of Egypt. To the same movement belongs a number of glass objects shown by provenance to have been made in Syria; they are mostly small bottles or amphorae, sometimes supported by grotesque animals, and all bedecked with glutinous festoons applied in a half-molten state.[2] Lamm illustrates examples in *Gläser*, pls. 20, 21, and 23, with the suggested date fifth to sixth century. Our pl. XXVIII, 3, shows a bottle of thick yellow-green glass in the Buckley collection at the Victoria and Albert Museum; a fragment found at Al Mina came from a bottle precisely similar save that the metal is bluish green. The bottle-neck with grooved sides, fig. 10 B, may belong to the 'transitional' phase (cf. Lamm, *Gläser*, pl. 8, 7); so, too, the badly shaped bottle (fig. 10 D) of colourless glass, with a collar formed by telescoping the neck. Lamm describes similar examples from Persia as belonging to a Syro-Egyptian type of the fifth to seventh century (*Iran*, pl. 9, D–F). The bottle-neck, fig. 10 G,

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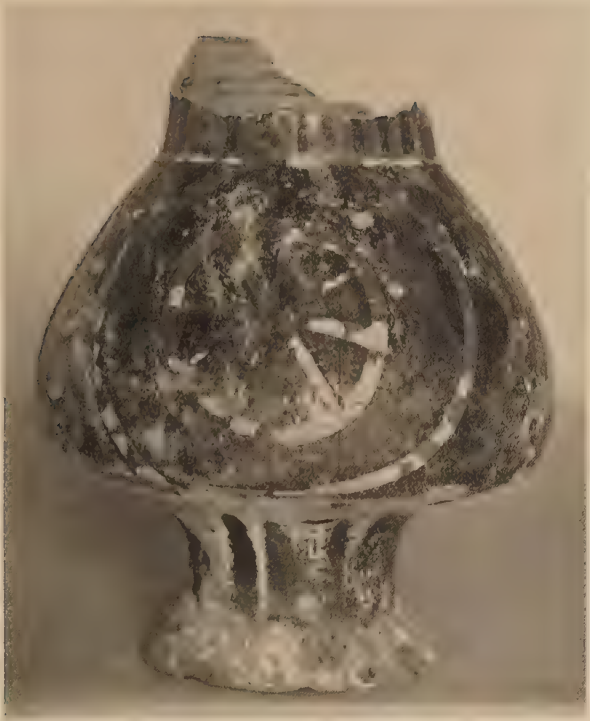
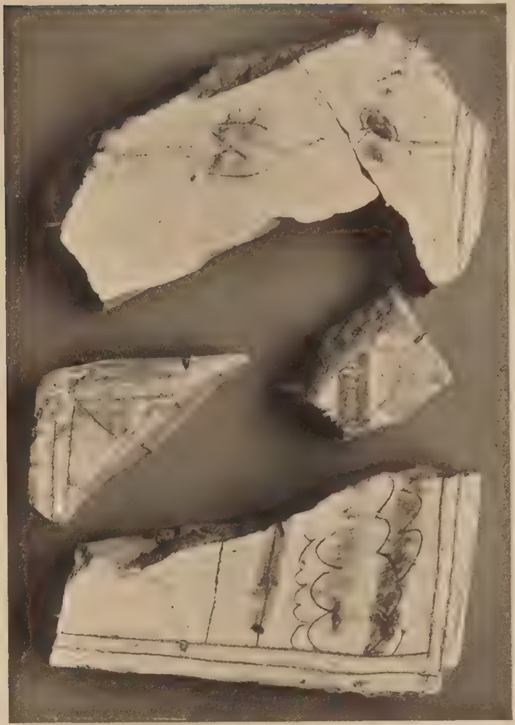
[1] C. J. Lamm, *Mittelalterliche Gläser und Steinschnittarbeiten aus dem nahen Osten*, 1930 (hereafter referred to as *Gläser*); *Das Glas von Samarra*, 1928 (ref. *Samarra*); *Glass from Iran in the National Museum, Stockholm*, 1935 (ref. *Iran*).

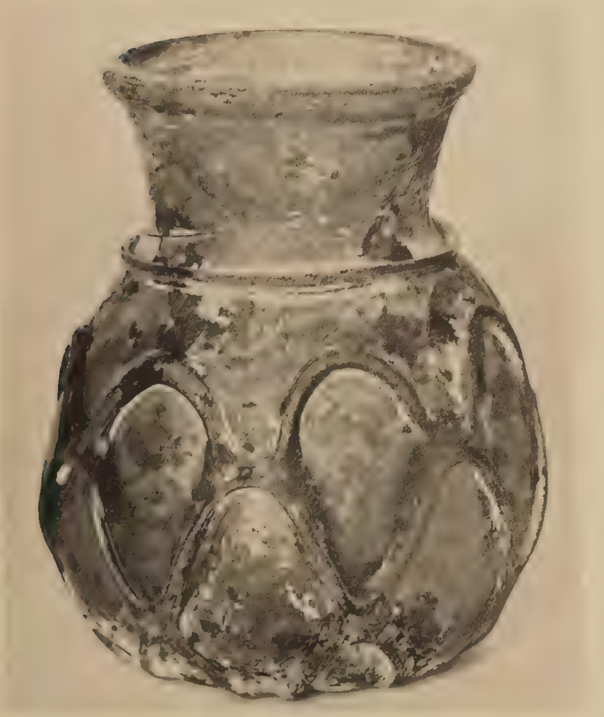
[2] See Lamm, *Samarra*, p. 86, for a lengthier discussion.



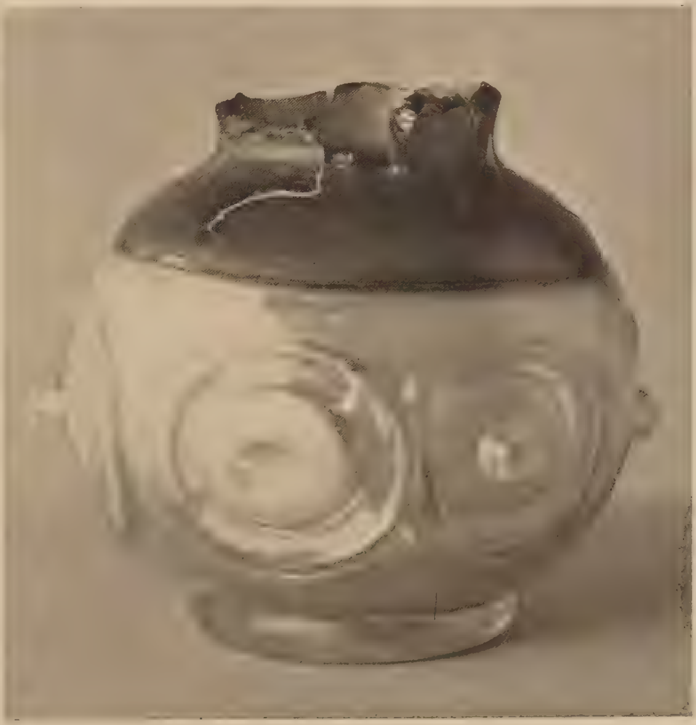
1. Byzantine jug; thirteenth century (Antioch Museum)



2. Tile-fragments of local sgraffiato-ware; thirteenth century



3. Syrian glass bottle in the Victoria and Albert Museum; fifth or sixth century



4. Bottle of blue and white glass in the Victoria and Albert Museum; ninth to tenth century

Published by the Society of Antiquaries of London, 1938

is of clear yellowish glass resembling celluloid in texture, and the way the lip is splayed out, then folded in, appears to be a Roman treatment in contrast to the Islamic practice of cutting off the neck abruptly.[1] Fig. 10 Q shows the foot of a chalice-shaped cup made of bluish-green glass; numerous examples were

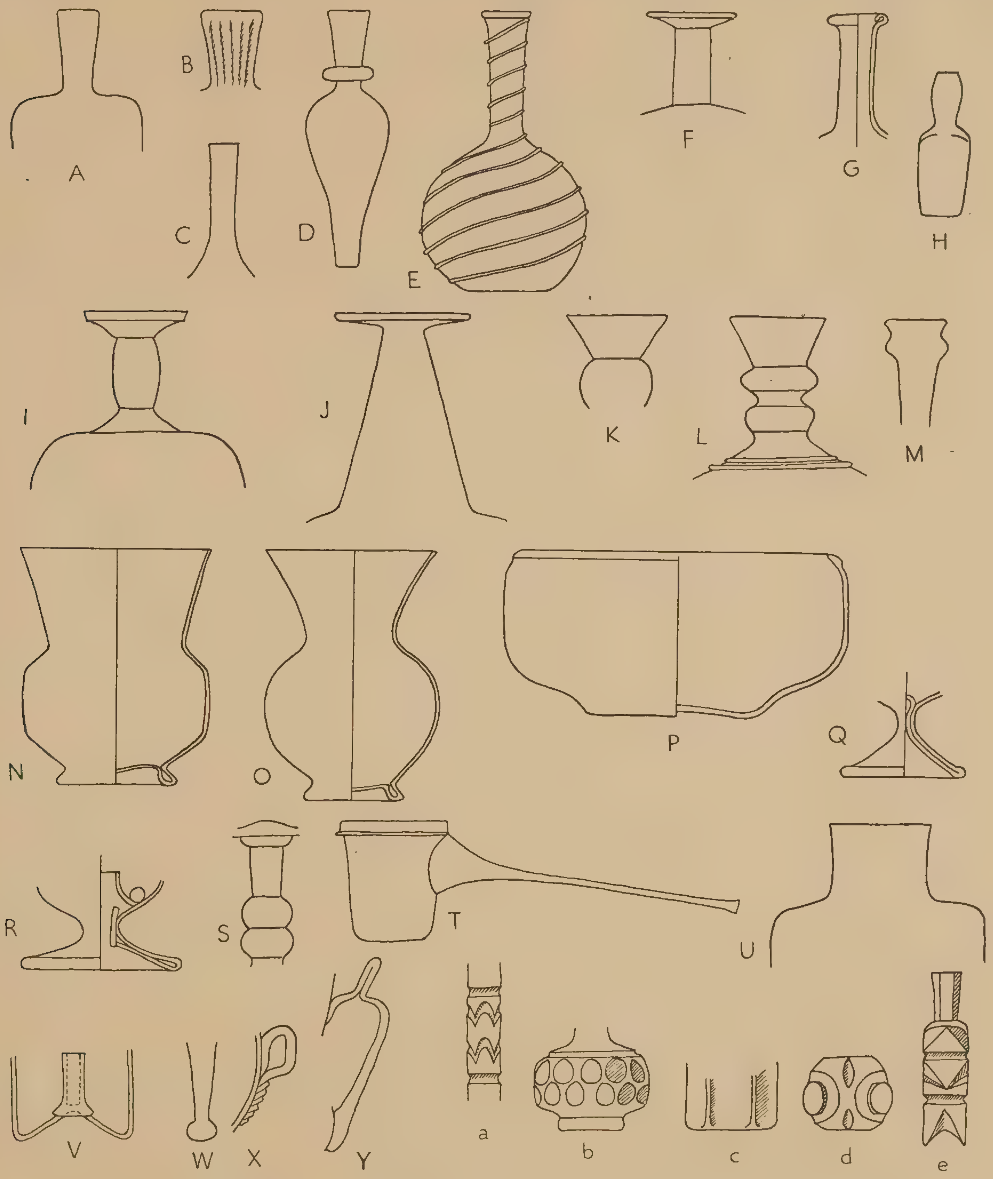


Fig. 10. Glass: plain (A–Y), moulded (c), and cut (a, b, d, e). Ninth to tenth century

discovered on the site. Similar cups are commonly found in Syria, and must have been made in that country, though the same shape, with the curious pushed-in foot, is also well represented in Egypt.[1]

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[1] *Ibid.*, p. 7. Compare D. B. Harden, *Roman Glass from Karanis*, 1936, pls. XVIII, nos. 608, 612; XX, 793, 813, etc.

It is worth remarking that the few fragments I describe as late Roman were in far better preservation than those of definitely Islamic date; indeed, it seems to be the case with all glass found in Syria that the superior metal used by the Romans resists atmospheric conditions that have reduced medieval pieces to powder.

(b) *Arab period, mainly ninth to tenth centuries*

Undecorated glass. To judge from references in contemporary literature,[2] Syrian glass maintained during the middle ages the world-wide prestige it had won in Roman times. To-day we have little material on which to judge its merit; scientific archaeologists, in their hurry to reach the lower levels, have evidently paid scant attention to medieval finds,[3] and such glass as has reached the local museums and antique-shops came from illicit excavations the circumstances of which are obscure. At Al Mina itself a mass of ruined fragments bore eloquent witness to the corrosive properties of the Syrian soil. By way of contrast, the rubbish-heaps of Fostat have preserved in their dry sand a marvellous wealth of glass, showing every kind of technique; but we should not allow this material evidence, due in part to an accident of climate, to outweigh the literary evidence which claims for Syria too a great reputation in this branch of art. Under the Fatimid rulers (969–1170), Egypt no doubt absorbed the best craftsmen of every kind; before them, the glass-factories of Tyre and Sidon probably rivalled those of the Nile valley as they had in Roman times, producing work on very similar lines. The Roman glass of Syria and Egypt is often indistinguishable, whether by shapes or metal, and the family resemblance must have outlasted the advent of Arab rule. Much of the Al Mina glass can be paralleled by finds in Egypt—for example, the shallow cups with tonged ornament; in spite of this, the probability of its Syrian origin cannot be dismissed.

To what extent Islamic glass was transported from one region to another remains a baffling question. Small scent-bottles, like those illustrated in fig. 10c, H, e, might be carried over vast distances for the sake of their contents, and Lamm plausibly suggests that the type cut in the form of a molar tooth was made in Egypt, and broadcast by the perfume-trade over Mesopotamia and

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[1] Harden, *op. cit.*, p. 167 ff., pl. vi, 484, 482, 479. The *terminus post quem nihil* for the Karanis finds is apparently about A.D. 460 (pp. 24 ff.). Harden quotes two examples of Syrian provenance in English collections; they may frequently be seen in Syrian dealers' shops.

[2] Lamm, *Gläser*, p. 490, passages 36 ff.; see also pp. 15–16.

[3] *Ibid.*, p. 16.

Persia. A hundred and seventy of the little blue bottles (fig. 10 C; Lamm, *Samarra*, no. 105) were found in a single store near the throne-room at Djausaq, and this circumstance certainly suggests that they were imported for royal use. But glass vessels of no particular artistic pretension, in which liquids could not easily be sealed, would be unlikely to travel far from their place of origin. Certain fragments in the Victoria and Albert Museum, found in the ruins of Afrasiyab near Samarkand, are exactly like fragments from our site at Al Mina; it would, however, be unreasonable to suppose that they were imported all the way from Syria. There must have been small glass-houses, ready to supply local needs, scattered throughout the countries of Islam. Certain shapes recur in the most widely separated districts, in glass as in unglazed pottery. It is only when strongly individualistic forms of technique are adopted that we can attempt to sort out local schools, and I think that the condition is realized in some of the manipulated and coloured glass of Al Mina. For these reasons it is worth recording in some detail the characteristics of the ruinously incomplete material from the first Syrian site that has been adequately explored.

The cut glass for which Syria was praised by medieval writers was not represented in the Al Mina finds. Ornament applied by manipulating the hot metal in various ways was common, but the majority of fragments lacked any form of added decoration. The metal was usually bluish green in the coarser vessels, but for finer ones was rendered clear white by the addition of minute quantities of manganese to the molten 'batch'. Sometimes an overdose led to the appearance of swirling purple wreaths in otherwise clear glass—perhaps by intention, for the makers had a fondness for colour. Many pieces were stained a cool, pale blue with cobalt; others were pale amber yellow, with streams of darker brown running through them.

The shapes of the undecorated glass are shown in fig. 10. The common bottles of bluish-green glass have a lip abruptly cut off, not folded over as in pre-Islamic times (fig. 10 A); a wide-mouthed one with square shoulders (fig. 10 U) is of colourless glass with swirls of manganese purple. An unusual piece with an applied spiral thread, of thin colourless glass (fig. 10 E), has an internal partition dividing neck and body into two equal halves.[1] Fragments with similar threading were found in the 'E 2 hoard' with pieces of small blue scent-bottles (fig. 10 C); the latter need not be local, but identical bottles from Samarra[2] suggest that all objects in this deposit are of approximately ninth-century date. The square scent-bottle of thick, colourless glass (fig. 10 H) is a ubiquitous form perhaps exported from Egypt to all countries in the Near East.[1] Other bottles of coarse blue-green glass have spreading lips (fig. 10 F, I, J); finer ones with conical mouths show one or more bulges in the neck (fig. 10 K, L, M).

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[1] Coarser bottle-necks, like Lamm, *Gläser*, pl. 25, nos. 16–22, were also found, the threads in some cases being of pale blue glass.

[2] Lamm, *Samarra*, no. 105. A hundred and seventy of these bottles were found at Samarra in a single store-room.

Many fragments belonged to wide-mouthed vessels with folded feet (fig. 10 N, O). These are finely made, of colourless, pale blue, or amber glass, the last colour usually streaked with deeper brown; one piece had applied threads round the neck. It is probable that most had handles (fig. 10 Y), though none of these remained in place, and the shape would then be very like the jugs of unglazed pottery (fig. 3 A, D). A similar treatment of the foot occurs at Samarra and in Persia,[2] but such vessels would hardly be transported, and we may be sure that the Al Mina specimens were made somewhere close at hand.

The bowl of thick, faintly yellowish glass (fig. 10 P) was found in the 'E 2 hoard', and with it shallow undecorated cups, shaped like fig. 11 D, some of blue-green, some of colourless glass; a larger cup or dish with vertical sides, 18 cm. in diameter, was stained a pale amber colour.

Knopped stems of solid blue-green glass (fig. 10 S) belonged to chalices;[3] cupping-glasses with folded lips (fig. 10 T), of similar metal, were found in great quantities all over the site, some being in the 'E 2 hoard'.[4] Fig. 10 R is an extraordinary object of uncertain use, with an orifice running from the foot through a tube and a pierced cone into the bowl; the yellowish metal is manipulated with profound if heavy-handed ingenuity. Lamps with cylinders inside them were especially common (fig. 10 V),[5] and the knopped fragment of pinkish glass (fig. 10 W) perhaps came from a lamp of a rarer kind,[6] intended for suspension or placing in a specially designed stand. The tooled handle (fig. 10 X) is of pale blue glass.

Cut glass. Al Mina produced very little cut glass. The bottle-neck, fig. 10a, of colourless metal with sliced cutting, resembles fragments found at Fostat.[7] Small globular vessels like fig. 10d, perhaps made for ointments, are scattered from Egypt through Samarra to Susa,[8] and the same applies to the small scent-bottles cut in the form of molar teeth (fig. 10e);[9] these would be carried far for the sake of their contents, and it is not unlikely that all were made in Egypt, where they have been found in great numbers. There were but few examples of the bottles at Al Mina, and only one of the ointment-pots. The small bottle

[1] Lamm, *Gläser*, pl. 3, nos. 46-8; *Iran*, pl. 3; *Samarra*, iv, no. 79.

[2] Lamm, *Samarra*, iv, no. 32; *Iran*, pl. 14 P.

[3] As Lamm, *Gläser*, pl. 2, no. 29.

[4] Lamm, *Gläser*, pl. 2, nos. 13, 14; *Iran*, pl. 15 A-C.

[5] Lamm, *Samarra*, iv, 38; *Iran*, pl. 14 J.

[6] Lamm, *Gläser*, pls. 4, no. 37; 5, no. 2.

[7] Lamm, *Gläser*, pl. 55, 4.

[8] Lamm, *Samarra*, no. 222; *Iran*, pl. 31 A-E; *Gläser*, pl. 52, 11, 13, 14.

[9] Lamm, *Iran*, pls. 36, 37; *Samarra*, nos. 217-19; *Gläser*, pls. 59, 61.

with circular facets, of colourless metal (fig. 10 b), may be an import from Persia, where this form of decoration was already used in Sassanian times; it probably dates from the ninth to tenth century.[1]

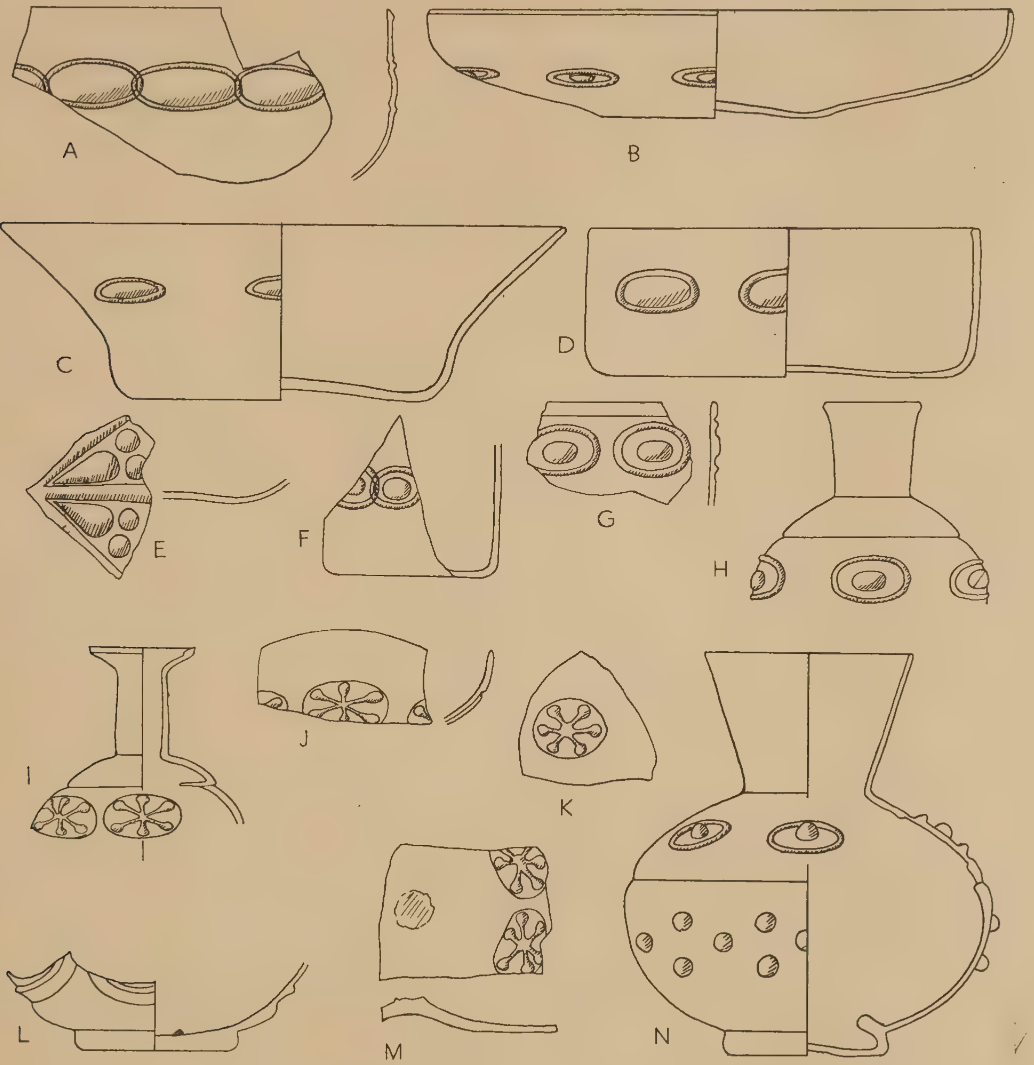

Fig. 11. Moulded and stamped glass. Ninth to tenth century

Diamond-engraved glass. A single fragment from the rim of a bowl of deep amber glass bore diamond-engraved decoration (fig. 12 G). Similar fragments have been found in Egypt, Mesopotamia, Persia, and the Caucasus; Lamm suggests that the technique originated in Egypt and passed to Mesopotamia (*Gläser*, pls. 50, 51; 'Les verres trouvés à Suse', in *Syria*, xii, 1931, p. 366, pl. LXXVII, 2).

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[1] Lamm, *Iran*, pl. 30 E, G; *Gläser*, pl. 53, 4, 6, 9. A rather similar kind of cutting is seen on heavy glass bowls from Kish approximately dated in the sixth century (D. B. Harden, 'Glass from Kish', in *Iraq*, i, 1934, pp. 131-6).

Moulded and stamped glass. The very nature of glass-blowing causes all vessels to be circular in cross-section unless some means of controlling the shape is adopted, such as a mould into which the bubble can be blown. Circular vessels take up more room and are harder to pack for transport than square ones, and the practical Roman glass-makers of northern Gaul were not slow to invent the convenient square, mould-blown bottle when something was needed in which to export the wines of the country. The Arabs adopted a similar practice only in the case of the small scent-bottles of square section (fig. 10 H), which must have been exported in great quantities from Egypt to other parts of the Near East. These objects, with their thick metal, invited cut decoration —those carved in the likeness of molar teeth have already been noticed. Sometimes blowing into a faceted mould produced a cheaper substitute for cut glass; for example, the fragment of thick, yellowish, mould-blown glass in fig. 10 C seems to be from an imitation of a cut bottle like Lamm, *Gläser*, pl. 58, 3, 4.

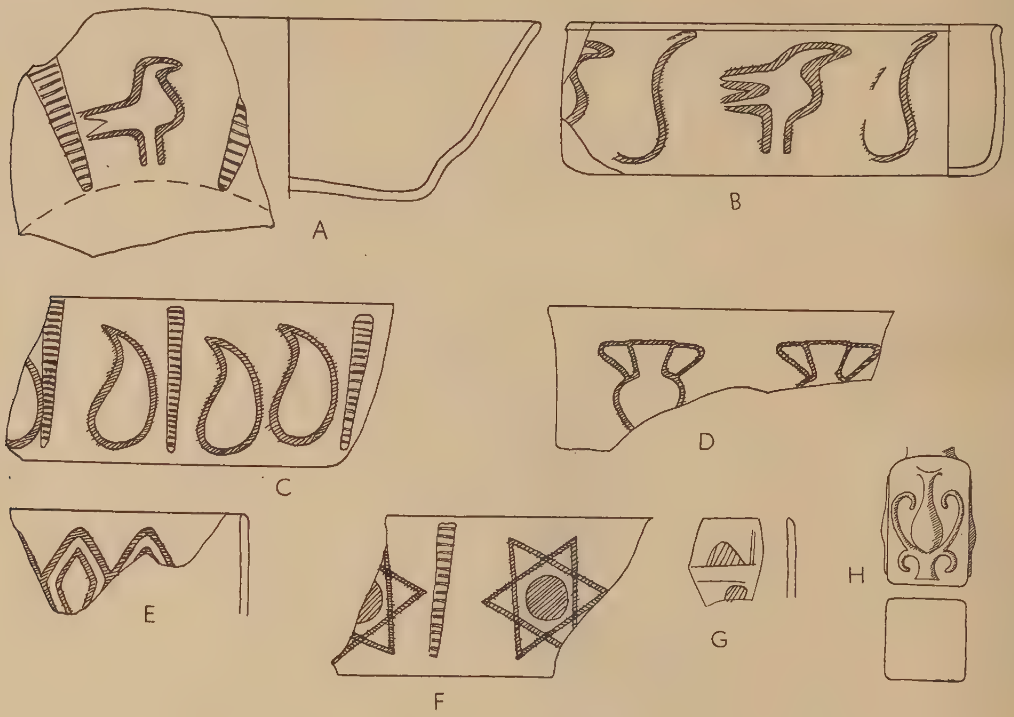

Fig. 12. Glass: with tonged decoration (A–F); with diamond-engraving (G); and moulded (H). Ninth to tenth century

A natural development of the mould intended merely to control the shape is that bearing countersunk patterns which will appear in relief on a glass vessel blown into it. When used for open bowls, a mould of this kind need be in only one piece, but for shapes with steep sides, which could not be withdrawn without flattening the relief, the mould has to be in two or more component parts which can be separated to release the glass inside. This process, familiar in Syrian glass of Roman date,[1] certainly continued into Islamic times, for in addition to vessels showing the vertical 'seam' left by the junction of the two halves of the mould, examples of the moulds themselves have survived and are to be seen in the Berlin Antiquarium.[2] At Al Mina a fragment from the bottom of a cup or bowl of bluish-green glass (fig. 11 E) was blown in a simple mould with a radiating tongue-pattern; similar pieces from Samarra show that this technique was employed in the ninth century.[3] A small bottle, of thick dark blue glass, was blown in a rectangular composite mould which left patterns in high relief on all four sides (fig. 12 H); somewhat similar bottles are dated by Lamm in the fifth to seventh centuries,[4] but here the decoration is more characteristic of the Abbasid period.

The Islamic glass-makers frequently worked with a thicker and less volatile metal than their Roman predecessors, and would continue blowing or spinning a vessel after the ornament had been fixed in its surface. This subsequent shaping tends to obliterate the traces of the method used to apply decoration, and it is consequently hard to tell whether a piece has been blown in a countersunk mould or stamped or pinched with some tool bearing the pattern on its face.[5] In fig. 11 A, B, C, D, are shown shallow cups or bowls, of colourless or bluish-green metal, with a relief pattern of oval rings; it is probable that the ornament was applied by means of a tong-like instrument whose smooth inner jaw forced the glass into the countersunk pattern on the outer one. The vessel was then taken up on the pontil, whose mark appears under the base, and spun until the circles had stretched laterally into ovals. A fragment of a small beaker of deep amber glass (fig. 11 F) and another of colourless glass (G) have received less modification after the ornament was impressed, and the circles have therefore retained their shape. The same means was used for applying the rosette pattern in fig. 11 I, J, K, M. In K, which is a piece of thick purple glass from the shoulder of a bottle, the flat circular depression left by the inner jaw of the tongs is clearly visible and exactly corresponds with the area of the relief pattern on the outside. Fig. 11 M, the base of a shallow bowl of bluish-green glass, has both the relief pattern and the pontil mark on the inside; subsequent rotation has stretched the circle into an oval and smoothed out the flat circular depression on the reverse. The deformation has gone a step farther on the fine, colourless fragment J.

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[1] R. Schmidt, *Das Glas*, 1922, p. 12.

[2] Lamm, *Gläser*, pl. 13.

[3] Lamm, *Samarra*, nos. 158–63.

[4] Lamm, *Gläser*, pl. 12, 1, 8.

[5] Lamm, *Samarra*, pp. 39 ff.; *Gläser*, pp. 50, 62 ff.

It would clearly be impossible to use the tong-instrument to impress patterns on the sides of a narrow-necked bottle, for the inner jaw could not pass inside the neck; if the neck was drawn inwards from the same bubble after the pattern had been applied, the necessary distension of the surface would flatten out the pattern altogether. Consequently bottles were made in two halves joined together by a horizontal seam—the same method as was adopted in making the unglazed earthenware water-pots with moulded decoration. Fig. 11, H, I, K, N, shows three examples of this kind from Al Mina; in every case the lower half is of colourless glass, while the necks and shoulders of H, I are pale blue, and those of N, purple. The tonged pattern was clearly applied before the two halves were joined. The bosses on the lower part of N were evidently applied in molten form, individually, and perhaps the shoulder was reinforced by similar additions in order to provide sufficient thickness of metal at the points where it was stamped with the pattern. There is a bottle of this kind, with the upper part of pale blue glass, in the Victoria and Albert Museum (pl. XXVIII, 4); on the shoulder is the stump of a vertical handle now lost. With the evidence of the Al Mina fragments it seems safe to attribute it to a Syrian factory working in the ninth to tenth century. Lamm has suggested Egypt, Syria, or Iraq as origins, and tenth to eleventh century as a date, for pieces of a similar kind (*Gläser*, pls. 15, 18, 19, 22).

Glass with tonged decoration. Quantities of shallow, cylindrical cups, all fragmentary, bore decoration impressed in the surface while the material was hot by an instrument which must have resembled a pair of tongs. The metal is always blue-green, and the walls fairly thick; vertical bands with horizontal ribs divide the sides into panels containing simplified birds, amphorae, leaves, or geometric figures. The impressions made by the outlines of the decoration are repeated on the inside of the vessel in exactly the same places, indicating that the tongs had identical patterns in relief on both jaws; if squeezed hard enough, they would cut right through the walls of the glass. The motives found at Al Mina are shown in fig. 12, and include some not illustrated in Lamm's drawings of similar objects from Egypt.[1] He is of the opinion that this technique originated in Egypt, but was taken up in Iraq and Persia. It may have been practised over a considerable period, but the finds from Al Mina evidently belong to the ninth or tenth century, and may well be of local make.

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[1] Lamm, *Gläser*, pls. 16, 17, 18; p. 62. *Samarra*, pp. 45 ff. Very few pieces were found at Samarra. The examples from the Caucasus (Lamm, *Gläser*, pl. 18, 4, 7, 12, 14) probably reached there from Persia, and suggest that the type was made in that country as well.

Glass decorated in gold and coloured enamel between double walls. One of the most refined forms of glass-decoration used by the Romans is that conveniently described by its German name of *Zwischengoldglas.*[1] It is chiefly found in medallions at the bottom of open bowls. Figures or actual portraits are drawn with a needle-point through a coat of thin gold, which is then protected by a second coat of glass fused over its surface. The technique appears to have originated at Alexandria about the second century A.D., to be transplanted later to Italy and the Rhine district; bowls with portraits done in this way were commonly cemented into the walls of the Christian catacombs of Rome. There is no existing material to prove that the technique survived in Europe during the middle ages, but it may well have done so, for it is carefully described by the Westphalian monk Theophilus, who compiled his *Diversarum artium schedula* about the beginning of the eleventh century.[2] The gold cubes used in Byzantine mosaic were made in a similar fashion, by fusing a protective second layer of glass over the colour.

There are three fragments to show that the Islamic glass-makers employed the *Zwischengoldglas* decoration. The first is the base of a bowl in the Victoria and Albert Museum (363: 45–1900), painted in thin engraved gold with a double-headed bird between two skins of yellowish glass. Lamm, who illustrates it in *Gläser*, pl. 47, 23, regards it as Egyptian work of the twelfth century. A second piece with a Kufic inscription in the Louvre (Salle Musulmane no. 6696) is mentioned by A. J. Butler (*Islamic Pottery*, p. 71), who dates it in the Fatimid period; the provenance does not seem to be recorded.

The third example is a fragment found at Al Mina (fig. 13E). The metal is colourless, and the decoration was painted in thin gold inside the shoulder of a globular vessel with a wide mouth, the ground being scraped away to leave a band of ornament evidently based on Kufic writing; spots of thick blue pigment were then added.[3] The protective coat of glass was finally blown inside the globular vessel and drawn upwards to form the neck. In fig. 13E the rounded lip of the outer coat can be seen in the profile drawing; the gold is hatched, the blue enamel, black.

Gold painting with scratched inner markings appears on a few other fragments,[4] but without the protective double coat, and comparison with Fatimid lustre-ware, in which a similar way of adding inner details is used, suggests that these were made in Egypt. The most splendid piece of this kind is the

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[1] R. Garrucci, *Vetri ornati di figure in oro trovati nei cimiteri dei cristiani primitivi di Roma*, 1858; R. Schmidt, *Das Glas*, 1922, p. 18.

[2] Ed. R. Hendrie, 1847, book ii, chap. xiii.

[3] A colour probably composed of powdered lapis lazuli with a glass flux, as used for the enamelled glass (Lamm, *Gläser*, p. 244).

[4] Lamm, *Gläser*, pls. 45, 1; 46, 26.

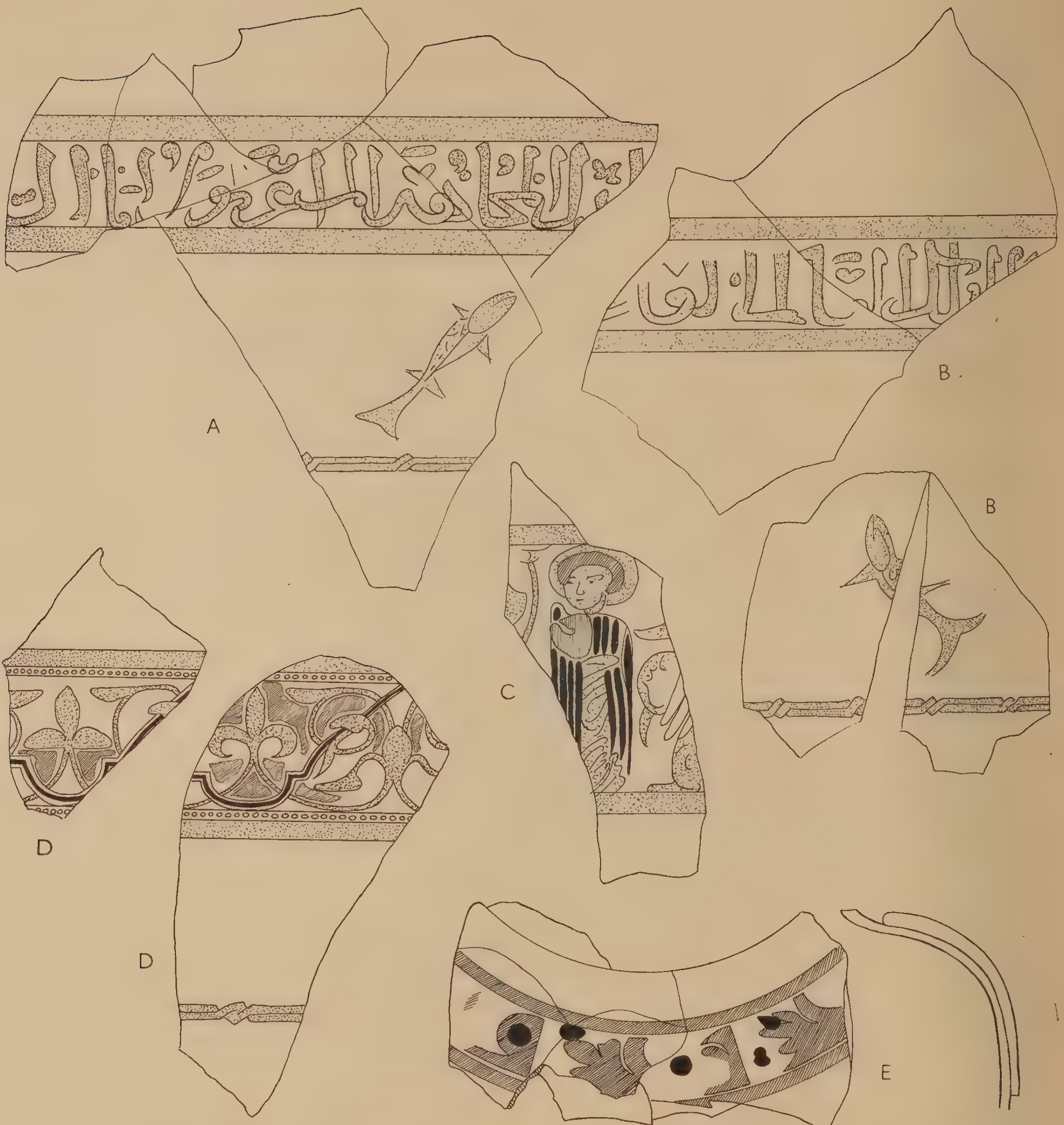

Fig. 13. Glass, enamelled and gilt (A–D), and with *Zwischengold* decoration (E). Twelfth to thirteenth century

fragmentary flask in the British Museum with an inscription relating either to Zanki II, Atabek of Singar 1171–97 and for a short time ruler of Aleppo, or to his grandson who reigned in 1219.[1] Lamm suggests that it was decorated by an Egyptian who settled in Syria after the fall of the Fatimids, and the Al Mina *Zwischengoldglas* fragment may have been made in similar circumstances. The added touches of blue enamel are of some interest in that they provide a link with the enamelled glass which was first made in the late twelfth or thirteenth century; the hybrid Syro-Egyptian technique supports Lamm's theory of Egyptian influence during the early years of the new industry.[2]

Enamelled glass. Certain fragments discovered in excavations at Rakka are the earliest evidence we have for the employment of enamel colours and gilding combined as a technique of glass decoration.[3] That they were made on the spot cannot be proved, but Rakka is known as a great productive centre for fine pottery and the same is probably true for glass as well. Schmidt stresses the Mesopotamian character of some of the finest enamelled glass but unaccountably fails to suggest Rakka as its origin.[4] The place lies on the borders of Syria, with which it was connected by the Baghdad–Aleppo trade-route, and it is reasonable to regard the factories of Aleppo and Damascus, praised by thirteenth- and fourteenth-century writers, as offshoots of the Rakka school. Lamm has endeavoured to divide the enamelled glasses, preserved complete in European church treasuries and in fragments found on widely scattered Eastern sites, into groups associated with particular centres. The inscribed pieces offer no clue as to their origin, and the 'intermediate' examples between the not too rigidly defined groups suggest that date plays a greater part in their differentiation than locality. Distribution is not helpful—in Egypt, for example, all the groups are found together, and on our own site, only eighty miles from Aleppo, the products of that city and Damascus are present in equal quantity.

The enamelled glass found at Al Mina, fragments of four conical beakers, is shown in fig. 13 A–D: A and BB are painted in thin gold with red outlines only; in D the dotted areas are gold outlined with red, the hatched parts in blue, and the black dots and line in white enamel. In C the hair is blue, the dark strokes of the dress in thick red, the patch on the chest lemon yellow, the tips of the dress in the fragmentary figure to the right white, and the dotted areas in thin gold outlined in red. The fragments with inscriptions and fishes would be placed by Lamm in his *spärlich emaillierte, kleinfigurige Damaskus-Gruppe*, about 1250–1310 (cf. *Gläser*, pl. 144). The fragment D, on the other hand, should be brought into his *reichlich emaillierte, grossfigurige Aleppo-Gruppe*, of the thirteenth century (*Gläser*, pl. 132, 15, 19, 26), and this seems to be the home of the fragment with figures, c (*Gläser*, pl. 121). These fragments add little to our knowledge of enamelled glass—except that they should be dated before 1268. It was disappointing that on a Crusaders' site we should not have found any of the glasses decorated to order for the European settlers with Western designs.

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[1] Lamm, *Gläser*, pl. 42, 4.

[2] Lamm, *ibid.*, p. 243.

[3] Lamm, *ibid.*, pp. 243 ff.

[4] R. Schmidt, *Das Glas*, 1922, pp. 51 ff.

Other Objects

Apart from pottery and glass, very few objects were found. Some small bronzes and bone-carvings were evidently Coptic work imported from Egypt, where similar things are usually dated in the fifth to seventh centuries. The bronze dropping-spoon (fig. 14 A), the bronze bell (fig. 14 B), and the silver pin with a flattened head in the form of a bird (fig. 14 C) can all be paralleled by objects illustrated in the Berlin Catalogue (O. Wulff, *Altchristliche . . . Bildwerke*, 1909, pls. LIII, nos. 1059–61; XLI, no. 1066; LV, no. 1077). There was also one bronze reliquary cross, resembling those on Wulff's pl. XLV but without any engraved decoration. Two bone dolls were poor examples of a well-known type (fig. 14 D), and two fragments of bone carved with plant-ornament belonged to flat plaques used as a decorative application for furniture (fig. 14 F, G; cf. Wulff, *op. cit.*, pls. XXVII, 671–4; XXVIII, 639). One of the graves (Grave 19) found to the north-east of the site evidently dated from the same period. The body lay with its head to the east; with it were some short sections of copper tube corroded together (possibly Pan-pipes); a heavy bronze mirror with tang (diam. 12·7 cm.); a silver penannular ring (fig. 14 E, diam. 4·8 cm.) set with a plain carnelian scarab; a small, rectangular copper unguent-box (ht. 4 cm.); a bone spindle-whorl with part of the bronze spindle; and a copper pin and needle.

The ninth- to tenth-century Arab period was represented by the fragment of an inscribed marble grave-stele described on p. 76; by a lamp carved in soft grey stone (fig. 14 M); and by two small circular lids, evidently for lamps, carved with ornamental knobs in the same material. Sarre publishes a similar object found at Baalbek and mentions further examples from Samarra and Egypt. These stone vessels were apparently made all over the Near East for centuries (*Keramik und andere Kleinfunde der islamischen Zeit aus Baalbek*, p. 28, fig. 89).

Towards the north-east corner of the Al Mina site we found nineteen graves, evidently dating from the fifth to sixth century and forming the cemetery of Bytyllion. Twelve bodies were buried with their heads to the west, three with their heads to the east, and three to the south; five lay on their right side, one on its left, the rest on their backs. Three were children. Only one grave was made up, with rows of rough stone slabs leaning together tent-wise over the body. The objects with the bodies were confined to simple personal ornaments of the cheapest kind and a few copper coins which were too worn to be identified.

There were numerous glass bangles and bracelets, plain, ribbed, or mottled; a few bracelets of bronze, plain or twisted; and necklaces of coloured paste beads interspersed with a few of carnelian and crystal. Earrings and pendants were made of copper wire on which were strung beads and pierced copper discs. There were two flat silver pendants like fig. 14 H; a pair of silver bell pendants

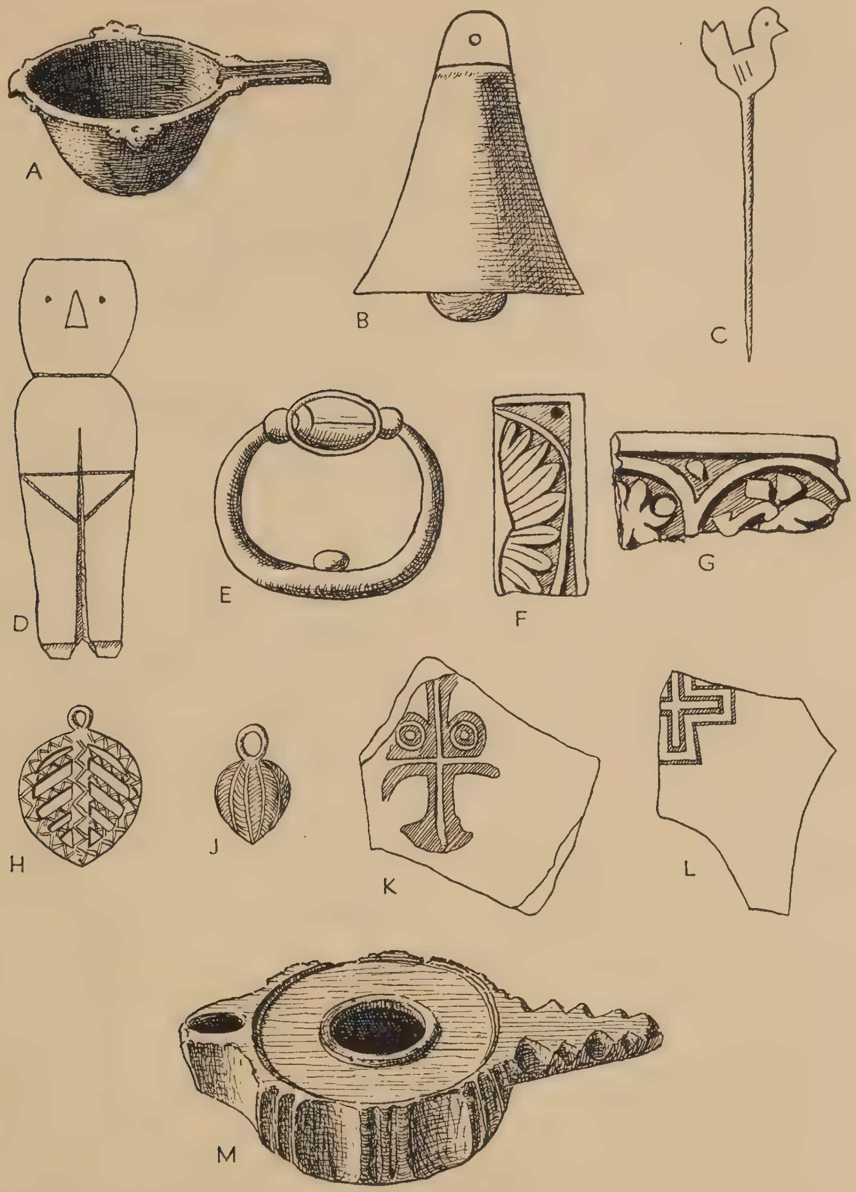

Fig. 14. Miscellaneous objects: A–L, Coptic (fifth or sixth century); M, Islamic (ninth century or later)

like fig. 14J (cf. Wulff, *op. cit.*, no. 1102); a silver ring with a rosette engraved on the flat bezel; and other plain rings of bronze.

INSCRIPTIONS

Few inscriptions were found. One fragment of a gravestone still bears part of its Kufic epitaph; another slab had been intentionally defaced with such success that it was impossible even to be sure that the original inscription was in Arabic. There were five inscriptions on pottery, four datable in the ninth to tenth century both by their own style and that of the object on which they appeared, and the fifth evidently of the late twelfth or thirteenth century. Mr. Rhuvon Guest very kindly examined all these documents, and has allowed me to publish his observations.

1. Fragment of a grave-stone, marble, with inscription cut in low relief on the flat surface; rounded back. Ht. 8·5 cm. (fig. 15 A).

Apparently the tombstone of a woman. One can read (line 1) '*Her child*' . . . (line 2) '*the 14th*' . . . (line 3) '*she died*' . . . (line 4) '*On them* . . .'. From the word used for 'she died' (*tanaiyahat* instead of *tuwuffiyat*) the grave was, it seems, that of a Christian.

Probably tenth century. The character used, which is peculiar, may be compared with that on the wood-carvings 9043, 9044, 9046, and 9042 in the Arab Museum at Cairo,[1] which are considered to belong to the end of the ninth or beginning of the tenth century.

2. Under the base of an unglazed water-bottle, moulded in relief (fig. 15 D, p. 77).

'*Made by*', followed by the name of the potter, which is doubtful, as it could be read in different ways. The name might be Badr or Bakr, an abbreviation, or it may be non-Islamic.

3. Round the side of an unglazed water-bottle, moulded in relief (pl. XX, 2 CC; fig. 15 E).

It does not seem to be possible to make anything useful out of these inscriptions. One of them consists of seven letters and the other of three.

4. Painted in purple on the rim of a dish, under transparent glaze (pl. XIX, 1; fig. 15 C).

This looks like a name written in an abbreviated way. Perhaps *Abû, Ahmad, 'Abd.*

5. On a fragment from the rim of a condiment-dish, in relief under green and yellow glazes (pl. XVIII, 1 D; fig. 15 B).

The word can be read either (1) *En Nasrî* or (2) *El Basrî.* (3) *El Nadhri* is also possible but improbable. (1) as the appellative might connect the person to whom it refers with (*a*) the tribe of Nasr; (*b*) a district in Baghdad; (*c*) an ancestor called Nasr. (2) would connect him with Basra.

I also submitted to Mr. Guest photographs or transcripts of two other condiment-dishes, one complete (in the British Museum), and one fragmentary

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[1] E. Pauty, *Les Bois sculptés jusqu'à l'époque ayyoubide* (Musée de l'art arabe), 1931, pp. 28–9.

(in the Berlin Museum, from Akhmim),[1] both made in moulds different from the Al Mina sherd. The inscription round the rim of the British Museum piece

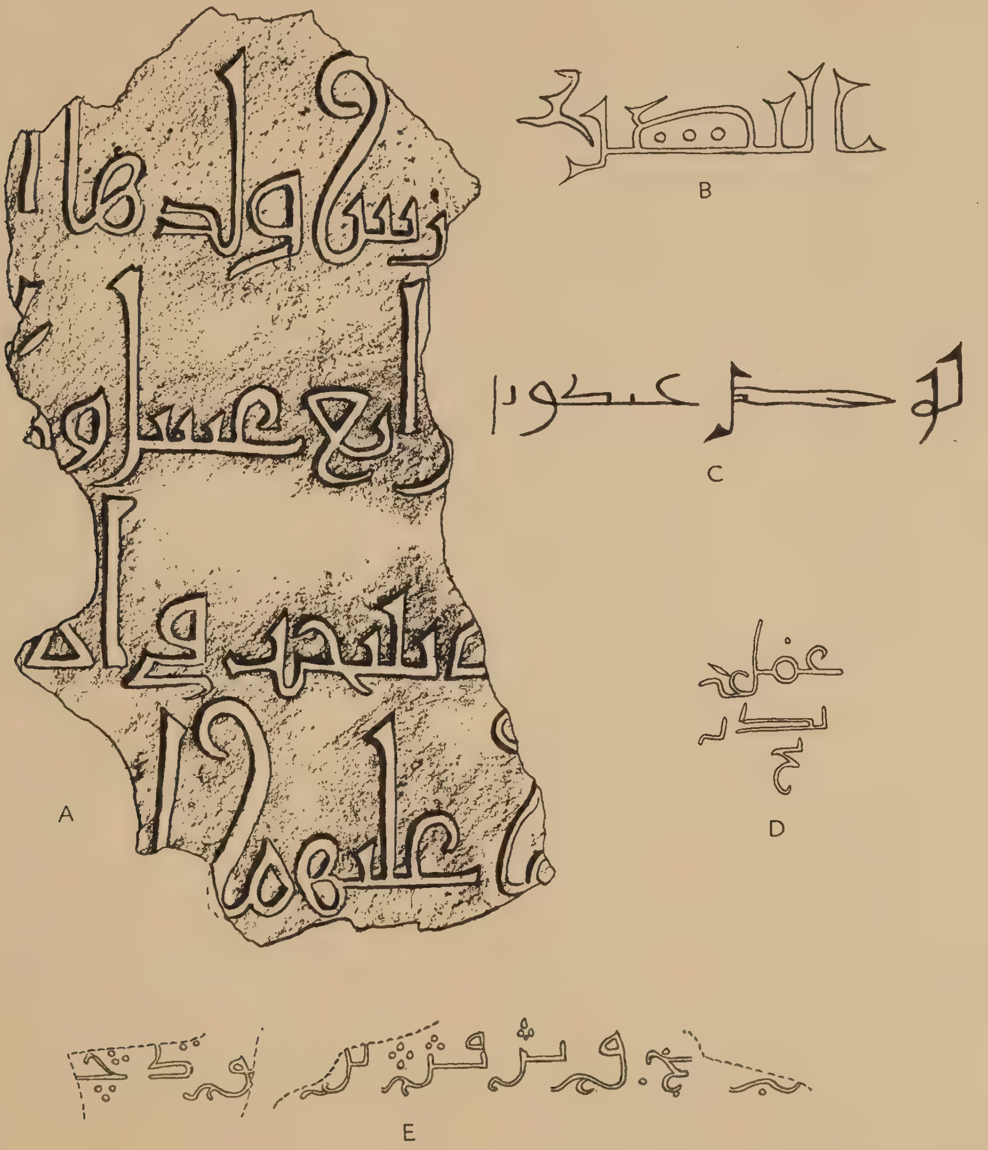

Fig. 15. Arabic inscriptions, ninth to tenth century

could be read *'amal Abu Nasr en Nasri* (or *el Basri*) *bi Misr*, 'the work of Abu Nasr en Nasri (or el Basri) in Egypt'. The Berlin fragment is inscribed *Abi Nasr el Na*... (or *Ba*...); while a fragment of a small dish found at Fostat and published by Fouquet bears an inscription erroneously read as *'Aamal abi Nasr*

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[1] Discussed by E. Herzfeld, *Samarra*, ii, 82.

el Nos (*rani*). Here the last word is incomplete and it should continue *Nasri* (or *Basri*). Evidently these four objects, which are shortly to be published by the writer, were all made in the workshop of a single potter—Abi (or Abu) Nasr en Nasri (or Basri) active in Egypt during the ninth century.

6. Incised on a fragment of a sgraffiato-ware bowl of the Crusaders' period, between the legs of a bird (pl. XXII, 1D).

Mr. Guest says, 'The inscription consists of the word *Babaghâ'* = "parrot". It does not look as late as the thirteenth century.'

There is no added colour, green or brown, on this fragment, and it may be one of the earlier pieces of those found. The general evidence of coins, however, suggests that it is not likely to be much before the first half of the thirteenth century.

In conclusion, it should be added that the greater part of the pottery and glass fragments described in this article, representing the result of the 1937 campaign, is now the property of the Victoria and Albert Museum. A few pieces found in 1936 are in the British Museum, and the remainder are in store pending the completion of the new Antioch Museum. I acknowledge with gratitude the helpful suggestions made by my colleague at the Victoria and Albert Museum, Mr. W. B. Honey, and the assistance given by Mr. S. A. Cook when I examined the Al Mina material in the British Museum; last, but not least, the great kindness shown by the Society of Antiquaries in undertaking to publish this article.

IV.—*The Sculpture of Visigothic France*

By J. B. WARD PERKINS, *Esq.*

Read 29th October 1936

THE sculpture of Dark Age France is still almost unknown to archaeologists This is due not to any shortage of material, some of it of a high quality, but rather to an absence of adequate publication. A certain number of objects have been reproduced *ad nauseam* in the major works of reference. But with the exception of the illustrations in Coutil, *L'Art mérovingien et carolingien* (an extremely valuable, if inaccurate, body of material) and in De Lasteyrie, *L'Architecture religieuse en France à l'époque romane*, and of sporadic records in the journals of local societies, there is little else that is available for study. It is hardly surprising that even the main lines of development of French sculpture in this period are quite uncertain; and that uncertainty is at present likely to remain. In the absence of published material the most that can be attempted is the identification and description of single groups of sculpture, which may ultimately provide the bricks for some more imposing structure.

The present paper is an attempt to survey in its entirety one such group, the sculpture that was produced in the late fifth and early sixth centuries in south-western France, chiefly under the Visigothic domination which ended in A.D. 507. For a variety of reasons this group did not have an important stylistic effect upon subsequent Dark Age French sculpture. It does, however, in point of time provide an essential link between that and the Gallo-Roman sculpture of the classical period; and it is only by the establishment of a secure chronology for the Visigothic series that it will be possible to venture with any hope of success into the uncharted wilds of the succeeding period. The establishment of such a chronology is the primary purpose of this paper. It also attempts to give a definitive account of the sculpture itself, viewed as a little-known, but extensive, local school of late Roman art. It has proved necessary briefly also to consider a group of fifth-century Massiliote sculpture, from which the Visigothic was itself in part derived. The relations of Visigothic to later Dark Age work are also separately discussed, but the examination can here be only of the most cursory character.

The writer is deeply indebted to Mr. E. K. Waterhouse, with whom he visited and discussed many of the Visigothic sites. He has, moreover, provided a number of illustrations. Mr. A. W. Clapham, Dr. E. Kitzinger, Mr. T. D.

Kendrick, Dr. J. M. Santa-Olalla, Mr. C. E. Stevens, Dr. R. E. M. Wheeler, and Dr. H. Zeiss have all given much helpful advice. In particular, the fact that they have been unable to indicate any close parallels outside France to the Visigothic material invests the negative conclusions here drawn with an authority that they would otherwise certainly lack. To the authorities of the many French museums involved the writer is further indebted for much courtesy and help, in particular for permission to take the photographs here reproduced.

The bibliography is not large. Of the general works Le Blant's alone is of the first importance. He was intimately acquainted with the works of earlier antiquaries, in most cases now virtually inaccessible, and his judgement was extremely sober. Subsequent writers have added little of value to his account. The latest account, that of Michon in *Mélanges Schlumberger*, lists only 28 examples, and the commentary is of no objective importance. The following abbreviations are used:

Le Blant	E. le Blant, *Sarcophages chrétiens de la Gaule*, Paris (1886).
Catal. (*s.v.* Toulouse)	*Catalogue des collections de sculpture et d'épigraphie du musée de Toulouse*, (1912).
Caumont	A. de Caumont, *Abécédaire d'archéologie*, vol. 'Architecture religieuse'.
Coutil	L. Coutil, *L'Art mérovingien et carolingien*, Bordeaux (1930).
Espérandieu	E. Espérandieu, *Recueil des bas-reliefs de la Gaule romaine.*
Garrucci	R. Garrucci, *Storia dell' arte cristiana*, vol. v (ref. by plate numbers).
Lawrence	See p. 82, n. 2.
Michon	E. Michon in *Mélanges Schlumberger*, 1924, vol. ii.
St.-Amans (*s.v.* Agen)	G. B. de St.-Amans. *Essai sur les antiquités du département de Lot-et-Garonne*, Agen (1859).
Tholin (*s.v.* Agen)	G. Tholin, *Architecture religieuse de l'Agenais*, Agen (1874).

THE FIFTH-CENTURY TABULAR ALTARS AND SARCOPHAGI OF MARSEILLES

After four centuries of eclipse at the hands of its Roman rival Arles, Marseilles experienced a great revival of prosperity in Late Roman times; and throughout the troubled years of the fifth century, during which over the whole of the rest of Gaul Rome and barbarism were slowly merging into a protesting unity, Marseilles, and with it that part of Provence which looks to Marseilles as its natural centre, remained an island of virtually intact Romanism. The fact is a vital one for the understanding of the influences which were at work in the formation of the new France that was coming to birth; and in no field is it better illustrated than in the sculpture which it produced.[1]

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[1] The group of sculpture here considered constitutes only a part of the fifth-century output of Marseilles. The remainder consists in part of exotic works (e.g. the slabs from Belcodène in the

The archaeological wealth of Marseilles suffered severely from the furies of the French Revolution. From the extant remains, however, and from the drawings of pre-Revolutionary antiquaries, it is possible to see that during the fifth century there was established at Marseilles a flourishing school of stone-carving, whose products are to be found scattered over most of Basse-Provence and the lower valley of the Rhône. Two classes of object were manufactured, sarcophagi and flat tabular altars. These present certain distinctive features, and it is necessary to examine these before discussing the date of the sculpture and the sources from which it was drawn. A detailed list of the known members of the group will be found at the end of this section.

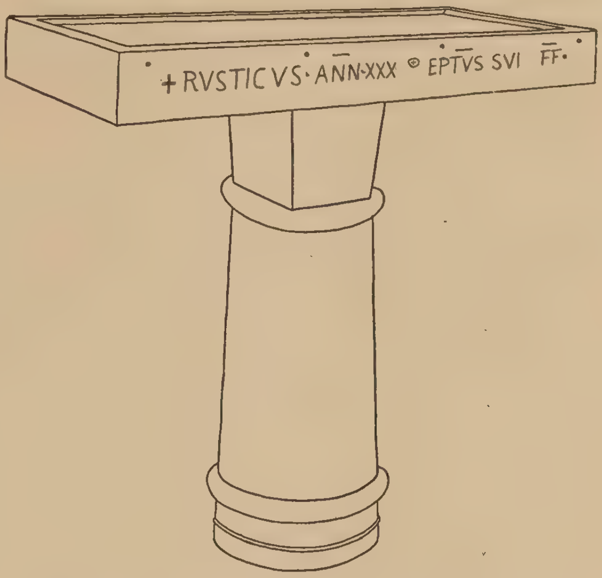

Fig. 1. The altar of Bishop Rusticus, A.D. 456, formerly at Narbonne and now at St.-Étienne-de-Minerve (after the reconstruction by M. Ph. Héléna)

The altars form an easily recognizable group. Each one consists of a flat altar-table with raised and moulded borders, the whole resting upon one or four columns according to size. The example which was dedicated in 456 in the church of St. Félix at Narbonne and was subsequently transplanted to a small village in Hérault, St.-Étienne-de-Minerve, is in some respects unique (fig. 1). It bears no decoration; and the material from which it is cut, i.e. marble from the quarries at St.-Pons-de-Thomières (Hérault), proves it to have issued from a local workshop under Massiliote influence rather than from those of Marseilles itself. But the shape is typical and there can be no doubt that it was made under conditions of the closest relationship with the main group of tabular altars, with which it is here for convenience listed.[1]

Musée Borély, perhaps of African origin), in part of other groups of late Roman sarcophagi. The latter are chiefly known from the often summary sketches of pre-Revolutionary antiquaries; and although iconographically interesting, they do not seem to have played any important part in the subsequent history of French sculpture and they fall, therefore, outside the scope of this paper. It is, however, important to remember that the validity of the inferences here drawn is limited to the group under discussion.

[1] This altar played a long and important part in local life. Not only did it become an object of great veneration, as attested by the hundreds of secondary inscriptions which it now bears; but in late Carolingian times it also inspired a whole series of altars of similar form in Hérault, Roussillon, and Catalonia (studied at length by M. Deschamps in *Mélanges d'hist. du moyen âge offertes à M. Ferdinand Lot*, 1925), which played an important part in the contemporary renaissance of stone-carving.

The remainder of the series is all found in Provence and all are to some extent decorated. The motifs are simple and recurrent. The Constantinian chi-rho symbol and the twelve birds, representing the twelve apostles, the Agnus Dei and the twelve lambs, the chalice and vine-scroll, a few simple rinceau-motifs and mouldings—these in various combinations comprise the whole repertoire. There can be no doubt that they form a homogeneous group, although the marked technical deterioration visible in some examples, e.g. those from Auriol and Buoux, may well indicate that they were made over a considerable period of time. There can, further, be little doubt of their close relationship with the other elements of the fifth-century Massiliote sculpture, the sarcophagi. Two of these are still extant, both now preserved in the Musée Borély at Marseilles. Four others perished in the Revolution, although fragments of one (no. 3) have recently been unearthed in the crypt of St. Victor.

To one at least of the surviving sarcophagi it is fortunately possible to give a rough date, for it is a very late member of a series of sarcophagi, the 'City-Gate' group, about which a good deal is known. This group, which is of north Italian origin and distribution, derives its name from the background characteristic of its earliest and most distinctive members, and it presents two features which make it of particular value for comparative purposes: the typological progression from early to late examples is unusually clear, and one of the earliest members of the series is almost exactly dated by the death of its occupant in A.D. 390.[1] The group has been well and exhaustively studied by Miss M. Lawrence,[2] whose conclusions upon their date may be unreservedly accepted. It is therefore here necessary only to discuss those features which bear immediately upon the problem of the Massiliote sarcophagi.

One of the earliest of the City-Gate sarcophagi is that in S. Ambrogio at Milan.[3] Against the characteristic background is set the Mission of Christ to the apostles. Christ, with outstretched right arm, stands upon the mountain, while to right and left each of the twelve apostles raises his right hand in adoration. Below, on a smaller scale, the Agnus Dei and the twelve lambs form a symbolic counterpart of the main scene.[4] The hindermost lamb on each side is emerging from an arch-like structure; but whether these already had the significance of the gates of Bethlehem and Jerusalem which they certainly had in the sixth century (e.g. Garrucci, iv, pl. 252, Rome, SS. Cosmas and Damian), or whether, as indeed seems likely, the arches here do but echo the City Gates above and only subsequently acquired an apt symbolical connotation, it is not easy to demonstrate; nor is the point immediately relevant. From this, the original and pure form, the process of evolution is easy to trace. It consists in the conflation and confusion of the Mission scene with the scenes appearing upon other well-marked contemporary groups of north Italian or south French sarcophagi. Thus not only do fragments of City-Gate background make their appearance in such alien surroundings as the destruction of Pharaoh in the Red Sea (Le Blant, pl. XXX, 1; at Nîmes), but wholly foreign elements become similarly incorporated in the City-Gate series. The orderly procession of apostles splits into groups of unrelated symbolic scenes, and often only the central group of Christ and the two major apostles survives unaltered. At the same time the background splits up and dissolves, until only a single broken arch may remain to betray the descent from the city wall proper. One of the sarcophagi at St.-Maximin, near Aix-en-Provence, (Le Blant, pl. LVI, 1; Lawrence, 1932, no. 110) may be taken as a typical late and contaminated example of the City-Gate group. The appearance of palm-trees in place of the normal architectural background is a feature which can be paralleled upon several other of its later members.

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[1] The sarcophagus of Gorgonius at Ancona (Haseloff, *Pre-Romanesque Sculpture in Italy*, pl. 14). It by no means follows that the dates of purchase and of final employment were the same. In the present instance a date some ten years earlier would perhaps accord better with the evidence. But the point is not here of major importance.

[2] 'City-Gate sarcophagi' in *Art Bulletin*, x, 1927, 1–45, with which compare the same author's 'Columnar sarcophagi in the Latin West', *Art Bulletin*, xiv, 1932, 103–85; here cited subsequently as Lawrence, 1927, and Lawrence, 1932.

[3] Lawrence, 1927, figs. 2–5; Lawrence, 1932, no. 96; Garrucci, cccxxviii, 1–3, cccxxix, 1. Dated by Miss Lawrence *c.* 380–390, from its undoubted priority to the dated sarcophagus of Gorgonius at Ancona (Lawrence, 1932, no. 98).

[4] This theme, arches and all, reappears on the City-Gate sarcophagus in St. Peter's, Rome

The Marseilles sarcophagus (no. 1) falls typologically at the very end of the series (pl. XXXIV, 2). The solitary feature remaining from the original Mission scene, as represented on the sarcophagus in S. Ambrogio, is the central group of Christ, St. Paul, and St. Peter. But that was a stock fifth-century motif. In itself, therefore, it is evidence of no more than of the more or less close connexion of this Massiliote sarcophagus with the main stream of contemporary north Italian art. It acquires significance only in so far as it can be shown in this instance to be borrowed directly from the tradition represented by the City-Gate sarcophagi and datable therefore by the standards applicable to that group. Proof of this sort is by no means easy. The close relationship between north Italy and south France at this period, already illustrated in the contamination of the later City-Gate sarcophagi by the introduction of motifs proper to other groups, produces a bewildering variety of cross-currents and counter-influences, and by limiting one's attention to a sufficiently narrow field of facts it is possible to prove almost anything. Demonstration of the direct relationship that existed between the Massiliote sculpture and the City-Gate group cannot therefore

(Lawrence, 1927, figs. 15-18; Lawrence, 1932, no. 100), which is roughly contemporary with that at Ancona (n. 1, p. 82).

rest simply upon the occurrence within each of individual motifs. It lies rather in the virtual restriction of the motifs employed by the Massiliote craftsmen to those current upon the City-Gate sarcophagi, and in the absence of any other such group upon which they can as a body be found.

The lambs are found on all but one of this group of Massiliote sarcophagi. Three of these (nos. 4–6) call for no comment. The fourth (no. 3) is known chiefly from the drawing by Peiresc, whose accuracy has in this instance been attested by the fragments recently rediscovered in the crypt of St. Victor (pl. XXIX, 7). On the lid six lambs face the central chrism. The palm-trees, which are found also on the largest of the tabular altars at Marseilles (no. 10, pl. XXIX, 4), may recall those on such late City-Gate sarcophagi as that at St.-Maximin (Le Blant, no. 214, pl. LVI, 1). More significant, however, are the gates from which the hindermost lambs emerge. The same gates are to be seen upon one of the tabular altars, that at St.-Marcel-de-Crussol (no. 14), where, as here, they are non-functional and bear no obvious significance. It is hard to resist the conclusion that they are derived directly from the identical gates upon the two City-Gate sarcophagi already noted (p. 83), where alone the gateway finds an obvious and logical home. The body of the same sarcophagus reproduces on a large scale the scenes which appear on the lid of that first discussed (no. 1, pl. XXXIV, 2). Here is an element which has no part in the iconography of the City-Gate series. The drinking stags belong to fifth-century north Italian art, and do not seem to have emerged into common use until the decadence of the City-Gate sarcophagi. In this connexion one other feature may be noted which can probably be traced to a similar source, namely the leaf-and-dart moulding on the tabular altar at Vaison (no. 15). This moulding is one of those most commonly employed at Ravenna;[1] and it would indeed be strange if no relationship could be traced between Marseilles and that, the most vital, centre of Western fifth-century Christian art. The presence of such elements need not vitiate the general argument.

Of the sixth sarcophagus at Marseilles (no. 2, pl. XXIX, 6) only the body now remains. At first sight it bears little relation to those already considered. But a closer examination of the individual figures reveals the falsity of this impression. The figure on the extreme right of this sarcophagus, no. 2, exactly reproduces the third from the right of no. 1. The figures to the right and left of the central panel of no. 2 are strikingly similar to Paul and to the figure behind Peter on no. 1. And the connexion is put beyond doubt by the lid, now vanished, which displayed the familiar lamb-motif. The central figure of Christ, seated with nimbus, is another intrusive element which is not found on the City-Gate sarcophagi. It is not, however, necessary to go far afield for a parallel, for the same figure is to be seen upon at least two other Massiliote sarcophagi of which drawings are preserved,[1] and it was evidently a type current locally in the fifth century.

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[1] See refs. *s.v.* no. 15.

Small foliate rinceaux, akin to those which are found on the tabular altars and on the columns of sarcophagus no. 2 at Marseilles, are typical of, but are not confined to, the City-Gate group. More significant are the birds, which are seen on these alone of the fourth-century sarcophagi, at Milan and at Ancona, where in each case they flank a chrism within a ribboned wreath. The less usual upright form of the chrism, found on the tabular altar at St.-Marcel-de-Crussol, can be paralleled by that on the sarcophagus at Tolentino.

The chronology of the City-Gate sarcophagi is dependent upon the known date of one of its earliest members and upon their relation to other datable groups. The Ancona sarcophagus is dated A.D. 390 (see p. 82). With all regard for the rapidity of the degeneration which was taking place in the sculpture of north Italy and south France, it hardly seems possible to date the latest members of the series before 410. There are many historical parallels to suggest that this loss of artistic quality is no more than an index of the commercial prosperity of the industry, of which there is ample evidence in the great number and wide distribution of the surviving specimens. But an industry so constituted had no reserves of quality upon which to draw when outside circumstances upset its markets. It is hard not to see in the barbarian invasions and the resultant political turmoil of the decade 410–20 the events which finally killed production at Arles and the related north Italian centres. The discomfiture of Arles was Marseilles' opportunity. The derivation of the group of Massiliote sculpture here under consideration from the City-Gate sarcophagi shows that its earliest members cannot fall much, if at all, after 420, by which date production of the latter had certainly ceased. On the other hand it is not possible to assign to sarcophagus no. 1 at Marseilles a much earlier date without telescoping into an impossibly brief period the development of the present series. The date, A.D. 456, of the altar from Narbonne, would accord well with a chronology which places the earliest members of the series *c.* A.D. 420. How long production continued, it is not easy to decide; its latest members may well be as late as the close of the fifth century, possibly even later.

The distribution of the group is clearly defined (fig. 2). R. Buchner,[2] working upon wholly different material, has recently demonstrated the cultural isolation of this area during the fifth century. It remained aloof from the rest of France, and its political divorcement from the neighbouring kingdoms is reflected in the purely late Roman character of its sculpture and of the scanty remnants of its other artistic productions. Professor Zeiss has pointed out that the frequency of representations of Christian motifs, e.g. Daniel in the lions' den, in the art of the Burgundians is to be explained in terms of their proximity to this source of late classical culture. And it is perhaps not without significance that the date of the Narbonne altar falls before the capture of that city by Theodoric the Visigoth in 463. In the first half of the fifth century it is natural to suppose that Narbonne, isolated by the increasing might of the Visigothic power at Toulouse, would fall within the orbit of the revived Marseilles. The possibility of such a connexion is of importance in considering the channels whereby the Massiliote sculpture may have influenced the fifth-century sculpture of south-western France, which is next under review.

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[1] Le Blant, nos. 49 and 69, with reproductions in the text. Of the latter considerable fragments have recently been unearthed in the crypt of St. Victor.

[2] *Die Provence in merowingischer Zeit*, Stuttgart, 1933.

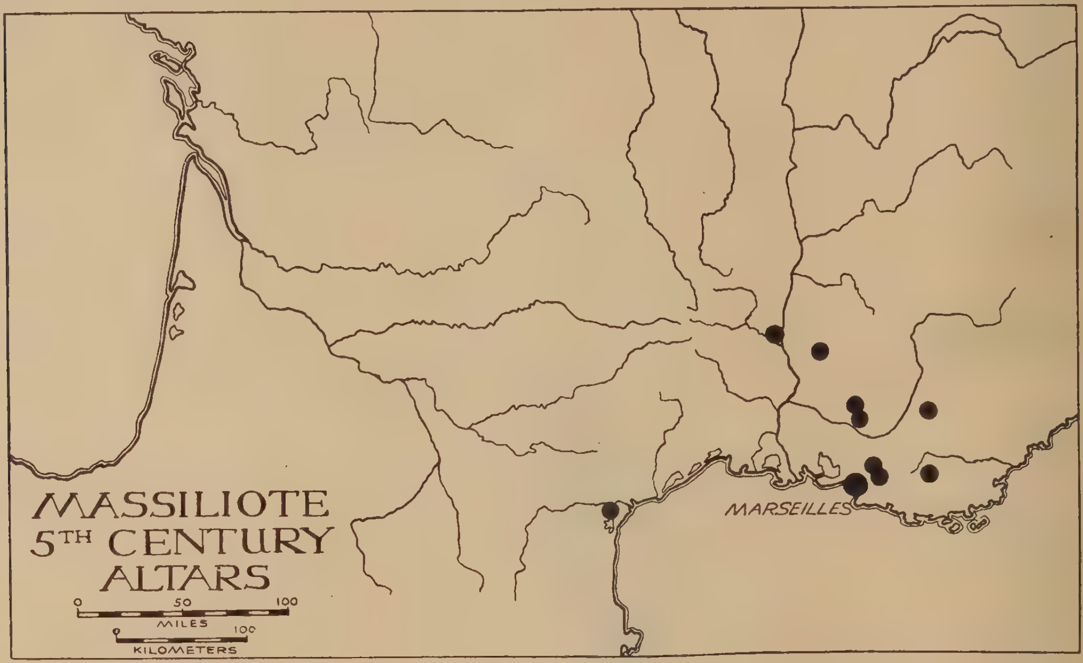

Fig. 2. Distribution of decorated altars of the type made at Marseilles. The altar of Rusticus at Narbonne is included in this map, to which should be added the one at Cavaillon

Sarcophagi

1. MARSEILLES 1. In the Musée Borély, Marseilles. Pl. xxxiv, 2.

Front only preserved. Body, the Mission of Christ to the twelve apostles clumsily set within an arcade of eight arches, the central column being replaced by the figure of Christ (cf. perhaps Le Blant, no. 54, pl. xvi, 2; and in the Visigothic series no. 127, Vienne). Lid, a central cartouche upheld by two putti, and above it a chrism and two dolphins; to r., the miracle of Cana and the spies returning from Canaan; to l., the

Agnus Dei and two stags drinking from the four rivers of Paradise, a motif which first appears in the destroyed mosaics in Sta. Pudenziana, Rome (see Lawrence, 1932, *s.v.* no. 79).

Le Blant, no. 52, pl. XII, 4; Lawrence, 1927, fig. 17; Garrucci, CCCXXXII, 1.

2. MARSEILLES 2. In the Musée Borély, Marseilles. Pl. XXIX, 6.

Front originally of 7 panels; left end and one panel destroyed; centre, Christ seated and nimbed beneath an arch; to r. and l. six of the apostles with scroll-work between each panel; r. end, the upright chrism set in relief upon an oval platter, an arrangement for which it is hard to find a parallel. Lid (disappeared but known from a drawing by Millin), twelve lambs.

Le Blant, no. 59, pl. XI, 1; Garrucci, CCCXLII, 1.

3. MARSEILLES 3. Considerable fragments in the crypt of St. Victor, Marseilles. Known from drawings of the eighteenth century and earlier. Pl. XXIX, 7, after Benoit.

Front only; centre the Agnus Dei and stags drinking (as on no. 2) and two versions of the Cana miracle. Lid, chrism between six lambs, the hindermost emerging from gates (see p. 83); in the background palm-trees.

Le Blant, no. 50, reproducing in the text Peiresc's sketch; Garrucci, CCCLXXXVI, 3; Benoit, *L'Abbaye de St. Victor*, p. 69, with an illustration of the rediscovered portions.

4. MARSEILLES 4. Destroyed. Known from a drawing by Ruffi.

The front of a lid, the twelve lambs face an arch within which are the four books, symbolizing the Evangelists (for which see Le Blant, *ad loc.*).

Le Blant, no. 51, reproducing in the text Ruffi's drawing; Garrucci, CCCLXXXVI, 1.

5. MARSEILLES 5. Destroyed. Known from a very rough sketch by Peiresc.

An imbricated lid, and upon one gable-end the Agnus Dei standing upon the mountain, whence flow the four rivers of Paradise; to either side a lamb.

Le Blant, no. 62; he quotes, but does not reproduce, Peiresc's sketch.

6. MARSEILLES 6. ? Destroyed since 1886, when it was described by Le Blant as existing 'sur la plateforme de l'église de St. Victor'.

60 cm. from the left end of a sarcophagus-lid, three arches of an arcade containing three lambs facing to the right.

Le Blant, *s.v.* no. 62.

Tabular altars

7. AURIOL (Bouches-du-Rhône). Now in the museum at Aix-en-Provence. 3 ft. 4 in. × 1 ft. 11 in. × 4·25 in. Supported on a single pillar.

Front, a chrism flanked by twelve birds. Back plain. Sides, vine-scrolls springing from a rudimentary central chalice. Very low relief, crude workmanship.

R. de Fleury, *La Messe*, i, pl. 47.

8. BELCODÈNE (Bouches-du-Rhône, 5 Km. south-west of Trets). Formerly in the church of St. Jacques. Now in the Musée Borély, Marseilles. Made of hard grey stone; 35 in. × 26 in. Probably supported on a single pillar.

The front alone is decorated with a formal leaf-scroll pattern.

9. Buoux (Vaucluse, 3 Km. east of Bonnieux). In the church.

Front, six birds. Back, six lambs. Sides, vine-scrolls springing from a chalice. The decoration is apparently incised and probably very late.

Coutil, pp. 120–1.

10. Cavaillon (Vaucluse). ? In the church. 3 ft. × 2 ft. 6 in. × 6 in. Supported on a single pillar.

Very crude decoration. Front, a chrism and four birds facing each other in pairs, one being inverted. Sides, a rudimentary vine-scroll. On the border of the upper face a crude frilled moulding, derived presumably from that of no. 15, Vaison-la-Romaine. Very late.

R. de Fleury, *La Messe*, i, pl. 56.

11. Marseilles (Bouches-du-Rhône) 1. From the church of St. Victor. Now in the Musée Borély, Marseilles. It was supported on four pillars. Pl. xxix, 4, after Le Blant.

Front, a chrism flanked by twelve birds; at each end a pillar and a palm-tree. Back, the Agnus Dei flanked by twelve lambs; at each end a pillar. Sides, vine-scroll springing from a central chalice, with birds in the foliage. On the border of the upper face vine-scrolls of a more formal character springing from chalices set at the corners.

Le Blant, pl. x, 2–4. Le Blant, *Inscriptions chrétiennes de la Gaule ant. au VIIIe siècle*, ii, p. 547. R. de Fleury, *La Messe*, i, pl. 46.

12. Marseilles 2. From the ancient baptistery. Said (1886) to be in the depositories of the cathedral. Supported on four pillars.

Le Blant describes it as ornamented with vine-scrolls with birds pecking the grapes, i.e. similar to the sides of Marseilles 1.

Le Blant, p. 54, *s.v.* no. 72.

13. Narbonne (Aude). The original altar of the church of St. Félix (since destroyed). Since the middle ages it has been in the church of St.-Étienne-de-Minerve (Hérault). Made of marble from St.-Pons-de-Thomières. 4 ft. 7·5 in. × 2 ft. 3 in. × 4·5 in. Supported on a single pillar. Fig. 1, after M. Héléna's reconstruction.

Although of normal form it bears no decoration. It is inscribed on the front, RVSTICVS AN̅N̅. XXX EP̅T̅VS SVI F̅F̅, i.e. 'Rusticus had this altar made in the thirtieth year of his episcopate', i.e. in A.D. 456. It became an object of great veneration and it is now covered with secondary inscriptions.

The identification of its original home is due to M. Héléna of Narbonne, to whom I am indebted for permission to reproduce fig. 1.

Héléna, *Bull. Comm. Arch. de Narbonne*, 1928–9; Le Blant, *Inscr. chrét. de la Gaule ant. au VIIIe siècle*, ii, p. 432.

14. St.-Marcel-de-Crussol (Ardèche). 5 ft. 4 in. × 3 ft. × 4·5 in. Supported originally on four pillars. Pl. xxix, 2.

Front, A ⳨ ω flanked by twelve birds. Sides, a ribboned wreath flanked by six birds. Back, A ⳨ ω flanked by twelve lambs, of which the hindermost on each side emerges from an arch (see p. 83). On the border of the upper face a formal rinceau.

Cast in the museum at St.-Germain-en-Laye; Reinach, *Catalogue illustré du Musée, etc.*, i, fig. 73. R. de Fleury, *La Messe*, i, pl. 48.

15. Vaison-la-Romaine (Vaucluse). In the cathedral. 6 ft. × 3 ft. × 6 in. The present supports are modern, but it was probably supported originally on four pillars. Pl. xxix, 5.

    Front, a chrism within a wreath flanked by two birds and two chalices whence spring vine-scrolls. Back and sides, vine-scrolls springing from a central chalice. On the border of the upper face a crude bead-and-reel moulding and a leaf-and-dart moulding (cf. contemporary Ravennate sarcophagi, e.g. that of S. Rinaldo and an example in S. Vitale, Dalton, *Byzantine Art and Archaeology*, figs. 36 and 37; cf. Haseloff, *Pre-Romanesque Sculpture in Italy*, pls. 32-4, 37).

16. Vaugines (Vaucluse, 4 Km. north of Cadanet). Now in the Musée Calvet, Avignon. 2 ft. 7 in. × 1 ft. 10 in. × 6 in. Supported on a single pillar. Pl. xxix, 1 and 3.

    Front, a chrism flanked by twelve birds; at each end a sketchy tree. Back and sides, formal foliate scrolls.

17. Riez (Basses-Alpes). A fragment now in the baptistery. About 6 in. high, upper and left-hand edge broken. A chrism within a circle, and to the right one of two opposed birds; above and behind it a bent branch.

    This is probably part of the smaller end of a tabular altar (the writer was unable to examine it closely). It might, however, belong to the gable-end of a sarcophagus.

Besides these demonstrably early decorated altars, altars of the same general form, plain save for simple mouldings, are common in Provence and may belong to any date down to the twelfth century.

The 'Visigothic' Sculpture

The sculpture next to be considered was a product of the Visigothic kingdom of southern France in the second half of the fifth century. Without begging any questions as to its origins, character, and date, it may here be termed for the sake of brevity 'Visigothic' sculpture. 'Aquitanian' sculpture, the name by which it was known to Le Blant, not only lacks precision, but it has acquired confusing connotations; whereas 'Visigothic' at least defines the region and period of its production. The reservations necessary in respect of its character will become apparent from a review of the material.

The history of the Visigothic kingdom is complicated and often obscure. A brief summary is, however, here sufficient. In the year 412 the Visigoths entered Gaul from Italy, and after their establishment at Toulouse in 417–18 the conquest of south and south-west France followed rapidly. In 463 Theodoric II captured Narbonne, and under his successor, Euric (466–84), the Visigothic empire in France attained its maximum extent, and its boundaries included the whole of France west of the Rhône and south of the Loire as well as a large part of Spain. This empire was not able to withstand the rising power of the Franks under Clovis. In 507 Clovis defeated and slew the Visigothic king at Vouillé, near Poitiers, and as a result of this battle the whole of Aquitania changed hands. Henceforth the Visigoths in France were confined to Septimania, i.e. to the Mediterranean coastal strip of Roussillon and Bas-Languedoc, and Spain became the centre of Visigothic power.

Visigothic domination lasted therefore for almost exactly the span of the fifth century, from *c.* A.D. 420 to 507. In character it was plainly the rule of a conquering and fairly tolerant minority.[1] There was no sharp cultural break, and Roman civilization remained the basis upon which was founded the life of the great majority of the population. The rarity of pure Gothic fifth-century jewellery and metal-work is a striking feature of southern French archaeology; and although the material is as yet imperfectly known, it is clear that a great many things, such as the stamped pottery, forms of burial, and perhaps even metal-work survived virtually unaltered from the previous century.[2] It is hardly surprising, therefore, that the sculpture made in this region in the fifth century should be in character a purely late Roman art, Visigothic only by virtue of the masters under whose rule it was made and whose domination gave the security necessary for its development.

With the exception of some of the marble columns which formerly decorated the church of La Daurade at Toulouse the whole of French Visigothic sculpture consists of carved sarcophagi. The church of La Daurade was destroyed in 1790, but surviving descriptions show it to have been a circular building with gilded mosaics.[3] The columns were carved with spiral flutings or with conventional vine-scroll ornament (pl. XXXVI, 7), and their chief interest consists in the indication which they give of the former existence of sculpture other than that of the sarcophagi.

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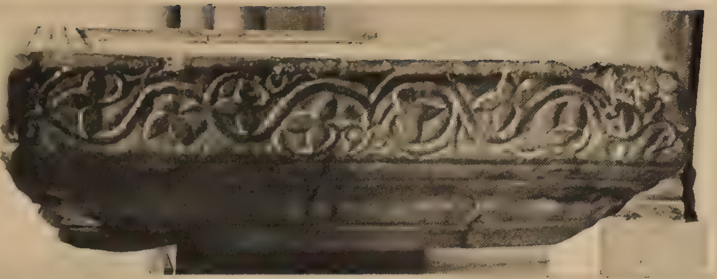
[1] This is apparent from the works of Sidonius Apollinaris, several of whose friends lived within the Visigothic territory. He himself knew Bordeaux and Toulouse, and describes the court of Theodoric II (A.D. 453–66) at the latter (*Ep.*, i, 2).

[2] A good deal of valuable information is contained in Courrent et Héléna, *Répertoire archéologique du département de l'Aude* (Montpellier, 1935).

[3] Of the columns, two are in the Metropolitan Museum at New York, two are in the Louvre, four are in the courtyard of no. 4 rue Joutx-Aigues, Toulouse, and the remainder in the Musée des Augustins at Toulouse or in private hands; see Rey, *La Sculpture Romane Languedocienne* (Toulouse, 1936), p. 35, for drawings of those formerly at Montegut-Ségla, now in a villa at Nice. The most recent survey of the evidence relating to La Daurade is that of Helen Woodruff, 'The iconography and date of the mosaics of La Daurade' (*Art Bulletin*, xiii (1931), pp. 80–104), who concludes that the evidence of iconography is in accordance with a fifth-century date and close contact with Ravenna. The conclusion is in keeping with the historical probabilities. It would, however, in this connexion be interesting to know more of the mosaic decoration of St. Victor at Marseilles, of which a tantalizing fragment alone now remains (see F. Benoît, *L'Abbaye de Saint-Victor, etc.*, 1936, rep. p. 16).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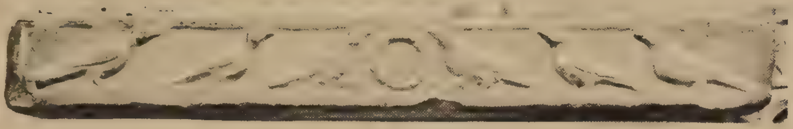
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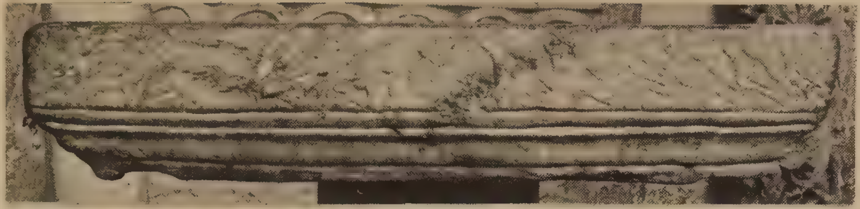
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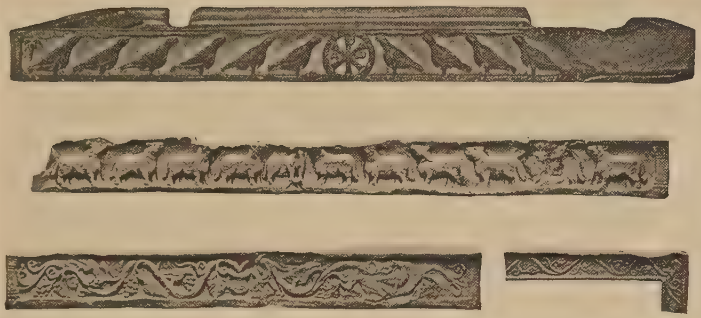
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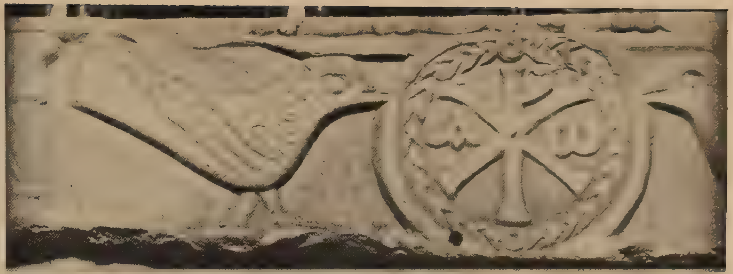
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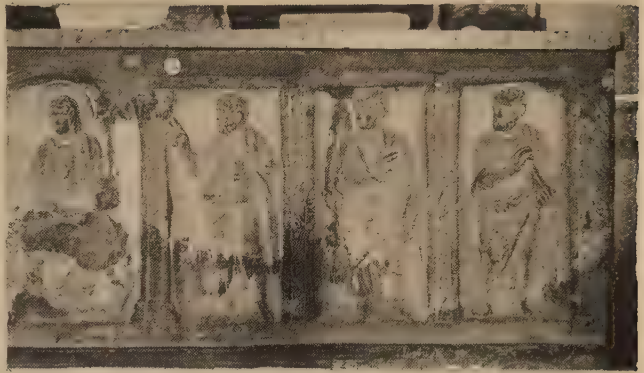
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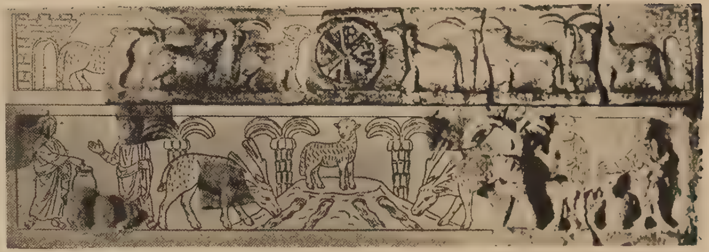
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1 and 3. Tabular altar from Vaugines. 2. Tabular altar at St.-Marcel-de-Crussol. 4. Tabular altar at Marseilles, no. 11 (after Le Blant). 5. Tabular altar at Vaison-la-Romaine. 6. Sarcophagus at Marseilles, no. 2 (*Photo. Musée Borély, Marseilles*). 7. Sarcophagus at Marseilles, no. 3 (after Benoit, *L'Abbaye de St. Victor*).

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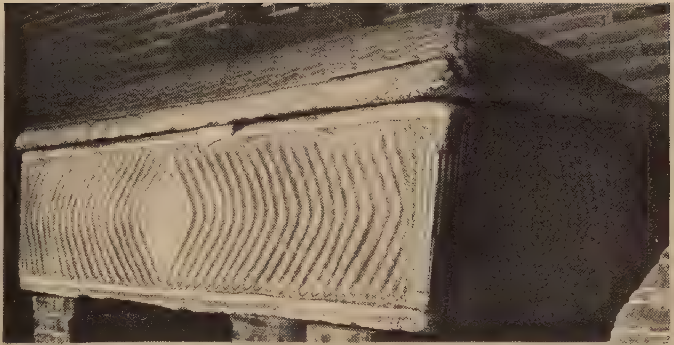
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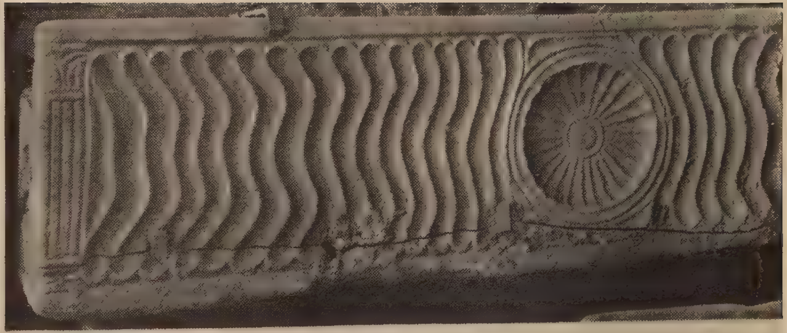
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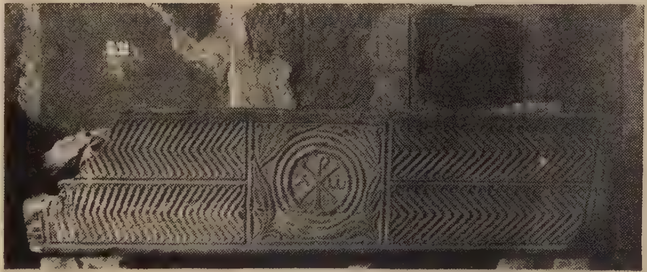
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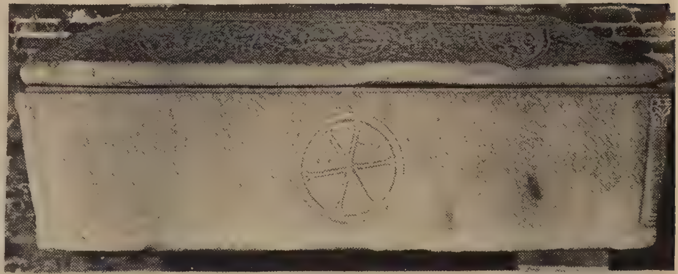
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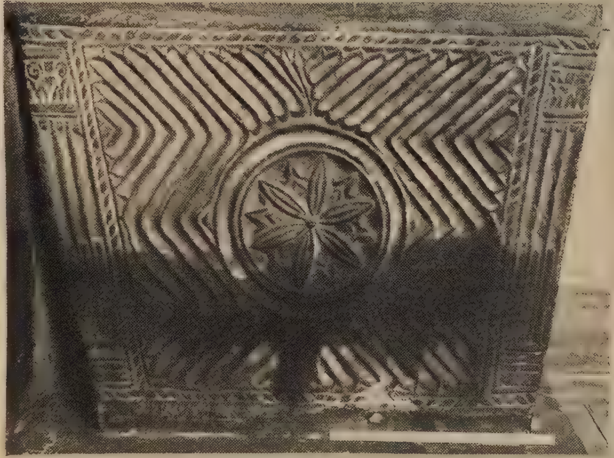
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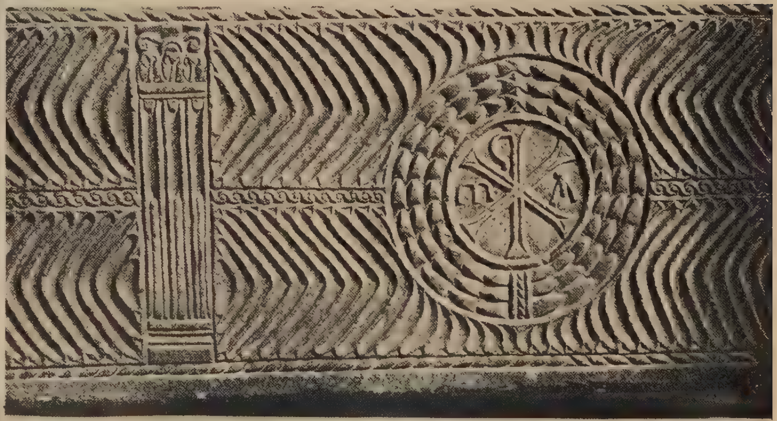
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1. No. 110, Toulouse 16. 2. No. 70, Narbonne 11. 3. Nos. 22, Béziers 3, and (above) 38, Clairac. 4. No. 112, Toulouse 18. 5. No 25, Bordeaux 1. 6. No. 52, Martres-Tolosanes 1

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The task of describing these latter is greatly simplified by the fact that their decoration is of a singularly uniform character. The motifs are stereotyped and, with a few exceptions, they reveal no development. Variety is obtained solely by the differing, and often incongruous, combinations of these motifs; and it is therefore possible by the selection and illustration of a limited number of typical examples to survey the whole field of French Visigothic sculptural art. A detailed examination of the sarcophagi will show that this stylistic unity holds good over the whole area of their distribution (see fig. 4), and that the identification of certain regional groups (see p. 106) is based upon minutiae of treatment which are relatively negligible in comparison with the unity apparent in the sculpture as a whole. It is thus possible to say that it was probably made all within a fairly short period of time, and further, that during that time the various centres of production must have been in close cultural contact.

The shape of the sarcophagi is constant. The body is rectangular, slightly shorter at the bottom of each face than at the top; there is no differentiation of head and foot. In a few examples of the Toulouse-Rodez group (see p. 106) the lid is of the L-shaped section characteristic of the Arlesian sarcophagi; but in the great majority the lid, where preserved, is of the shape which is clearly to be seen on pl. XXXVI, 2, with four sloping faces. The raising of one end, which is visible in a few instances (e.g. no. 28, Bordeaux 4, pl. XXXVII, 1), is probably due to the lack of symmetrical sense which is so frequently displayed by these sarcophagi, and only accidentally does it foreshadow the development of shape to be found on the later Merovingian sarcophagi at Bordeaux and elsewhere.

The origin of the form is less easy to determine. There is little to suggest that it was due to the Visigothic invaders, who, in the Mediterranean coastlands at least, seem to have buried their dead in coffins made of stone slabs, wood, tiles, or bricks as indiscriminately as did their Gallo-Roman predecessors, whose burial customs they clearly themselves absorbed.[1] On the other hand there is no real reason to believe that, of the great number of plain monolithic sarcophagi of this 'Visigothic' form which have been found in the great early cemeteries of the south-west such as St. Sernin at Toulouse, St. Seurin at Bordeaux, St. Caprais-d'Agen, and St.-Bertrand-de-Comminges (before A.D. 586, see p. 99), all are necessarily either Visigothic or post-Visigothic. The absence of locally made, decorated (and therefore datable) sarcophagi before the middle of the fifth century makes any such assumption particularly rash. And at Bordeaux not only were several rough stone sarcophagi of this form built into the late Gallo-Roman town walls, but one also bears, on a marble plaque recessed into the ridge of the lid, an inscription (apparently unpublished) of the late fourth or early fifth century.

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[1] See Courrent et Héléna, *Répertoire archéologique du département de l'Aude*: also, less fully, the volumes in the same series for Roussillon and Hérault.

The shape characteristic of the Visigothic series was therefore in all probability taken over directly from a type current locally in the Gallo-Roman period. The material, moreover, from which they were made, is in all cases probably local, the grey-white marble of the Pyrenean area.[1]

Only very exceptionally is the back decorated.[2] In this respect the series follows the Western rather than the Eastern convention. The lid, however, usually bears a simple design of imbrications on the fourth side. The settings employed for the decoration are varied, but it will be seen that they are compounded of a few simple and recurrent elements—the rectangular panel, the arcade, simple cord-mouldings, and columns, the last usually fluted, less commonly spiral or plain.[3] Some or all of the lid may be covered with imbrications, i.e. conventional scale-pattern derived from roof-tiles; and a large number of the simpler sarcophagi bear some form of 'strigil'-pattern, occasionally the S-strigil of its Italo-Arlesian prototypes (e.g. no. 73, Narbonne 14) or the W-strigil (e.g. nos. 69 and 113, Narbonne 10 and Toulouse 19), but most commonly in a form peculiar to the Visigothic series, the small V-strigil set in panels of two or four (e.g. no. 38, Clairac, *et passim*). The chrism, the Constantinian chi-rho monogram, set within a circular moulding or a wreath, is another motif constantly used—and almost as constantly misused. It appears elsewhere on dated French monuments between the years 347 and 493 (Le Blant, *L'Épigraphie chrétienne en Gaule et en l'Afrique romaine*, p. 22). Forms such as that on no. 52, Martres-Tolosanes (pl. xxx, 6), show clearly that the craftsman was dealing with accepted formulae of whose meaning he may have been wholly ignorant, an attitude of mind which is indeed apparent throughout his work and explains many of the symbolic incongruities of which he was guilty. In several, possibly late examples, the chrism is reduced to three strokes, ✱; the upright form, ⳨, occurs only twice, on nos. 81 and 116, Rodez 1 and Toulouse 22. It appears in Gaul on dated monuments *c.* 400–525 or 540 (Le Blant, *L'Épigraphie chrétienne en Gaule et en l'Afrique romaine*, p. 22).

These are such universal features of contemporary late Roman art that further comment is superfluous. And the same universality will be seen in varying degrees to be true of the remaining motifs of the Visigothic repertoire. The difficulty is the common one at this period, the selection from among the mass of possible iconographic or stylistic parallels of those which are immediately relevant. There is, however, one feature which all the Visigothic motifs present in common. With the single exception of the figures (and perhaps of the ivy-scroll) that were borrowed from Marseilles (see below, p. 98), all were present in the pre-Visigothic Gallo-Roman sculpture of south-western France. There is therefore, on these grounds, nothing inherently improbable in the suggestion that, whatever the stylistic influences at work, the subject-matter of the nascent Visigothic sculpture was acquired locally.

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[1] The recognition of certain examples as coming from the quarries of St.-Béat (Haute-Garonne) and St. Pons-de-Thomières is probably justified. Other identifications are perhaps less securely founded, and the writer has not ventured to add to their number.

[2] e.g. nos. 72 and 123, Narbonne 13 and La Valbonne, both of which are late.

[3] The fluted columns are strongly reminiscent of those which appear commonly on the Gallo-Roman stelae of the upper Garonne (Musée des Augustins, Toulouse, Catal. 239, 256, 276, 327 b, 372, 374).

The vine-scroll, which appears also on the columns of La Daurade (pl. XXXVI, 7), is one of the commonest motifs upon the sarcophagi, as it is indeed throughout early Christian art. It was at this date perhaps more frequently employed on metal-work and in mosaics than in sculpture. But there are several Gallo-Roman coarse-stone fragments bearing vine-scroll in the Musée Lapidaire at Narbonne; and the same museum possesses a fine piece of late second-century marble sarcophagus with putti gathering the vintage,[1] a type which clearly inspired several of the Visigothic series (e.g. nos. 6, 48, and 77, Agen 6, Loudun, and Poitiers). It appears also on several Pyrenean stelae, probably of fourth-century date, e.g. Toulouse, Musée des Augustins, Catal. 17bis (inscribed, SILVANVS FECIT) and 259 (inscr., SERANAE PRIMVLVS FILIVS), on both of which the vine-scroll springs from a chalice. With a few exceptions, such as no. 93, Soissons, the representation is very constant. No. 21, Beziers 2, and no. 37, Castelnau-de-Guers, may be selected as examples of this at its best and worst (pl. XXXI, 4, and pl. XXXVIII, 4). The formalization is only that dictated by the requirements of a flat all-over pattern and an inability to execute fine detail; and the few mannerisms, such as the treatment of the stalks, are insufficiently precise to throw any light on the question of origins and relations.

The ivy-scroll is more puzzling. To its most developed forms, e.g. on nos. 60 and 61, Narbonne 1 and 2, there is no obvious parallel. Simple ivy-scrolls are found among the mass of coarse-stone carving at Narbonne, suggesting the possibility of a local derivation. On the other hand Peirce and Tyler (*L'Art byzantin*, vol. ii, pls. 16 and 17) can quote two examples (but two only) from the East, an undated stone pilaster from the Hippodrome at Constantinople, now in the Ottoman Museum, and an ivory diptych of Areobindus at Lucca, dated A.D. 506. From these they tentatively derive the ivy-scrolls of south-western France. But such a derivation is rendered impossible by the chronology here established for the latter series; nor is a reverse derivation likely. The answer is perhaps to be sought in a parallel development from a common source, the tiny scrolls which are found on various north Italian and Arlesian sarcophagi, particularly on those of the City-Gate series, and again at Marseilles. In support of this it is to be noted that on several of the Visigothic series (e.g. nos. 33 and 96, Bourg-sur-Gironde and Toulouse 2) the ivy-scroll does appear in precisely the same guise. But the evidence hardly admits of a definite conclusion.

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[1] Espérandieu, *Recueil des bas-reliefs de la Gaule romaine*, i, 637.

The acanthus appears in a variety of curious forms. The typological evolution of these is set out in fig. 3. Nos. 1 and 8 are easily recognizable adaptations of parts of the familiar acanthus-scroll of Roman art, both metropolitan and provincial. Of this derivation a comparison of the sarcophagi, nos. 50, 99, 103, and 104 (Maguelonne, Toulouse 5, 9, and 10), can leave no doubt. The unit of this scroll-work consists of a V formed of two leaves (fig. 3, no, 4). This unit is employed either alone as a useful device for filling an odd corner (e.g. nos. 38 and 41, Clairac and Elne 2), or recombined to form what may be termed the acanthus-'tree' (fig. 3, no. 7). Fig. 3 nos. 2 and 3 derive from forms of the central plant of a scroll, and nos. 5 and 6 are obvious hybrids adapted to the awkward triangular panels at the end of a lid. That this schematic analysis has any chronological value is doubtful. Typologically 'early' and 'late' forms appear side by side; and only the degenerate objects which masquerade as acanthi on nos. 56, 72, and 122 (Mende, Narbonne 13, and the lid of La Valbonne) may safely be recognized as of late date. The value of the analysis is rather the light that it throws on the mentality of the Visigothic craftsman and the curiously individual outlook with which he approached his often hackneyed subjects. Symptomatic, too, of this outlook is the frequent combination here visible of incongruous elements, acanthus-scrolls

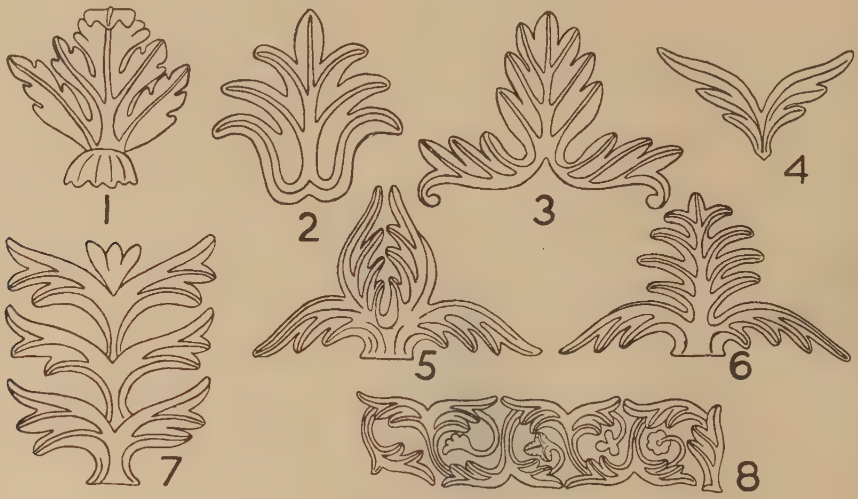
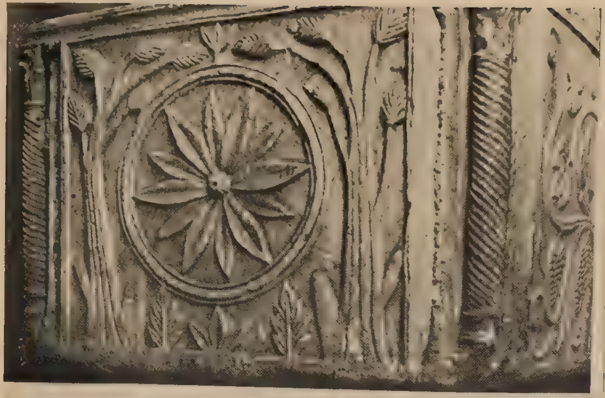


Fig. 3. Forms of acanthus used on the Visigothic sarcophagi



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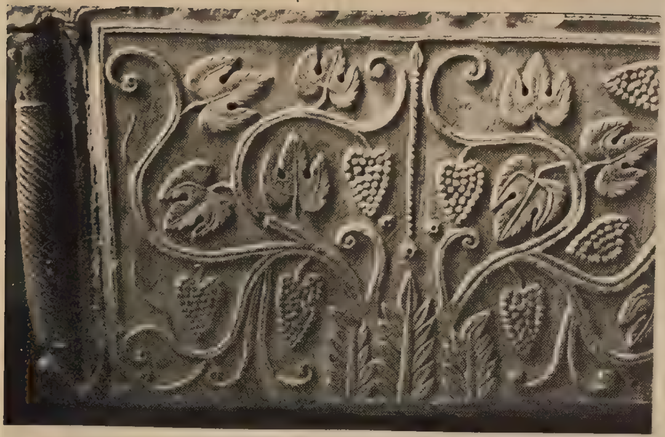

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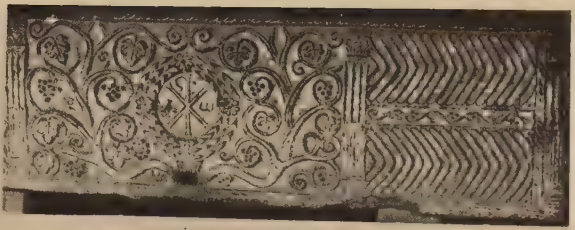

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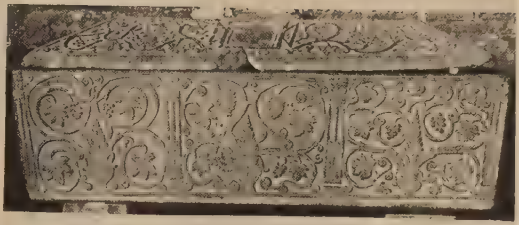

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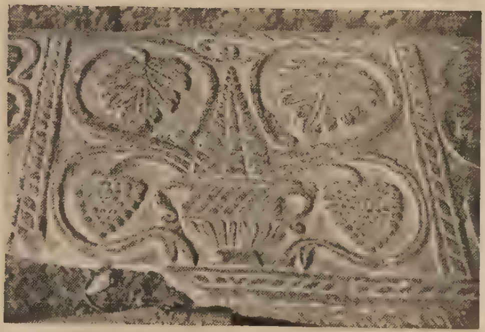

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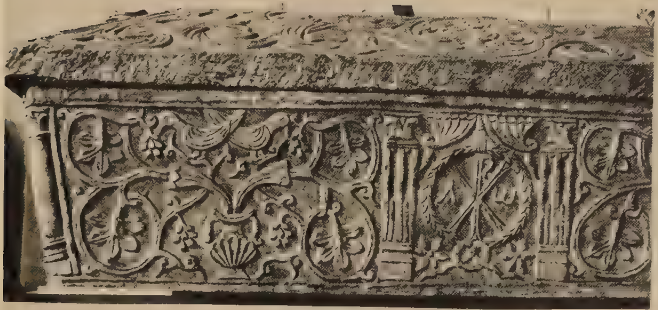

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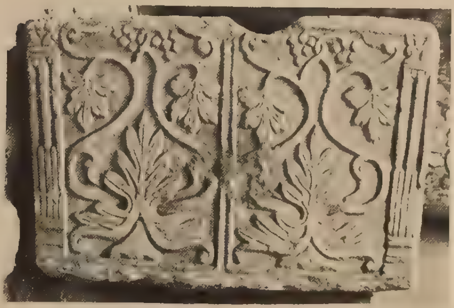

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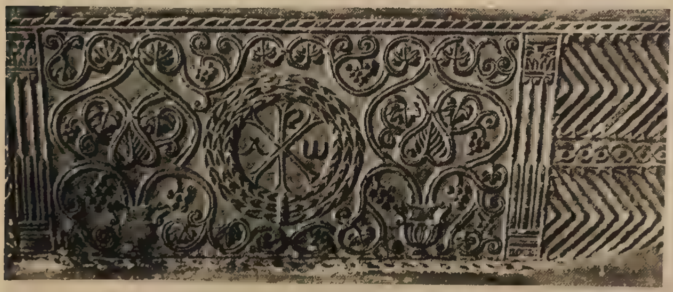

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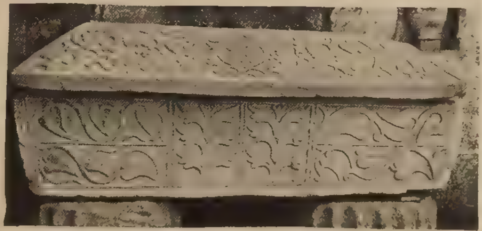

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1 and 2. No. 93, Soissons. 3. No. 33, Bourg-sur-Gironde. 4. Nos. 101 and 102, Toulouse 7 and 8. 5. No. 21, Béziers 2. 6. No. 31, Bordeaux 7. 7. No. 42, Elne 3. 8. No. 25, Bordeaux 1. 9. Nos. 60 and 65, Narbonne 1 and 6

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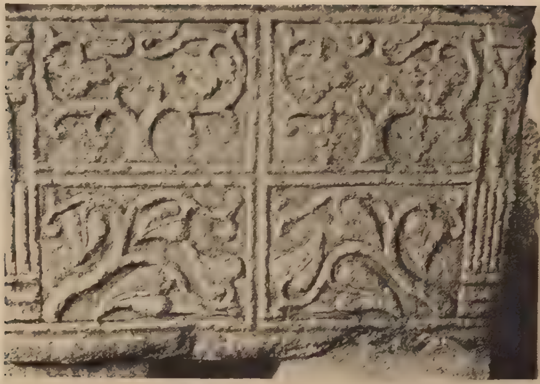
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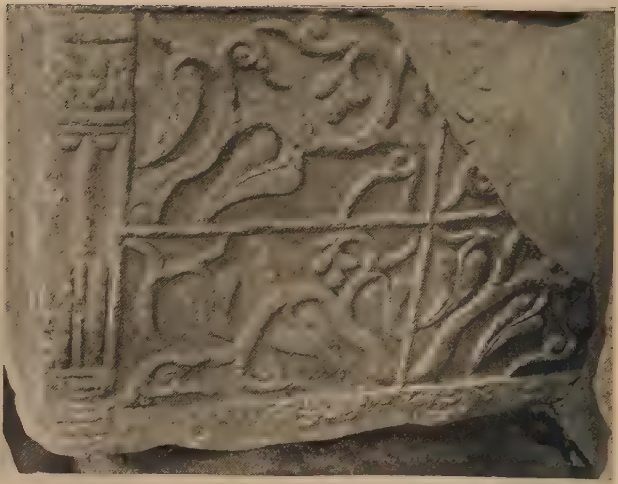
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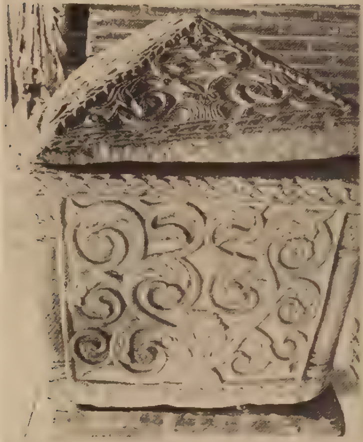
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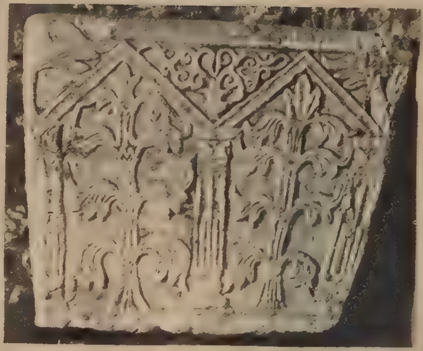
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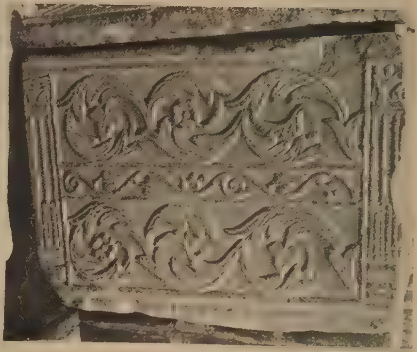
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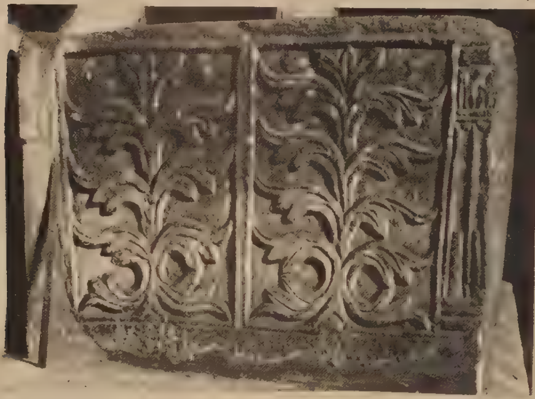
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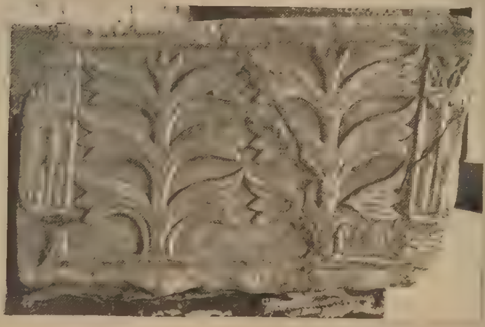
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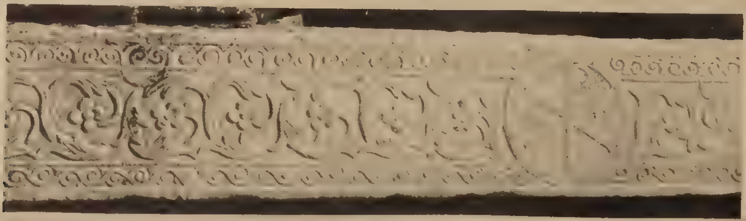
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1. No. 62, Narbonne 3. 2. No. 64, Narbonne 5. 3. No. 99, Toulouse 5. 4. No. 40, Elne 1. 5. No. 104, Toulouse 10. 6. No. 94, Tabanac. 7. No. 41, Elne 2. 8. Romanesque lintel at Cahors (see p. 102, n. 2)

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shooting vine-leaves and ivy-berries, vines springing from acanthi, acanthi springing from chalices. All of these reveal the eclectic and uncritical attitude of the sculptor, and they explain much that is puzzling in his work.

The 'marigold'-pattern is very common. It occurs both in its primary form, a six-pointed, compass-traced rosette, and with additional secondary petals, and occasionally with six 'petals' forming a ring lengthways around the circumference. Sometimes, e.g. no. 93, Soissons, it becomes merely an eight- or ten-petalled rosette. From its very universality this motif is of little help as a clue to artistic contacts, and it can here be noted only that it was in fact familiar to the native art of south-western France and of northern Spain.[1] It also played an important part in the sixth- and seventh-century art of Poitou.

The human figures that appear on the Visigothic sarcophagi fall into four roughly distinct groups. Of these three can be shown almost certainly to have been derived from originals that were to be found within the territory of the Visigothic kingdom.

The first group consists of biblical scenes of a symbolical character. The form of these scenes was so stereotyped, and their employment so universal, that it is here necessary only to consider the source from which they were immediately derived. Of this there can be little doubt. In part at least they were drawn from the late fourth-century Arlesian and north Italian sarcophagi upon which similar representations were so prominent a feature. It is, however, possible that the Visigothic craftsmen were also influenced by a small and little-known group of sarcophagi, of which three examples survive in and west of Toulouse.[2] These were themselves inspired by the same Arlesian models, and they are a valuable indication of the possibilities of local craftsmanship in Aquitaine before the establishment of the Visigothic tradition. In addition it must not be forgotten that isolated works of art (e.g. the fine sarcophagus at Le Mas-d'Aire, Le Blant, no. 120, pl. XXVI; cf. no. 9, Agen 9) may in particular instances have played their part in the formation of the Visigothic canon.

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[1] Espérandieu, vol. ii, *passim*; it is especially common on the stelae of the Upper Garonne.

[2] (*a*) Toulouse, in the Musée des Augustins, catal. (1912) no. 506; Le Blant, no. 154, pl. XL, 2.

(*b*) Auch, Gers, from the church of St. Orens, now in the Musée des Augustins, Toulouse, catal. (1912) no. 825; Le Blant, no. 115, pl. XXV.

(*c*) Lucq-de-Bearn, 5 Km. north of Oloron, Basses-Pyrénées, in the church; Le Blant, no. 121, pl. XXVII.

One or more of the fragments preserved in the museum at Auch may belong to the same group. The absence of any trace of Visigothic influence leaves little doubt that these sarcophagi precede the establishment of Visigothic sculpture in the same region, and that they belong to the early years of the fifth century. Though primitive in execution they show a considerable artistic sense.

The following are the motifs employed:

Daniel, praying with uplifted hands between two lions. Four examples, nos. 48, 55, 77, and 91, Loudun, Le Mas-St.-Antonin, Poitiers, and St.-Guilhem-le-Désert 1, all belonging to the Toulouse-Rodez group. On the first-named Daniel is clad in a simple garment; on the remainder he is naked. The scene occurs on four pre-Visigothic sarcophagi from this area—Le Mas-d'Aire, Lucq-de-Béarn, St.-Orens-d'Auch, and Tournissan (for the first three see p. 95, n. 2; that at Tournissan, of Arlesian type, is apparently unpublished). From the frequency with which it appears on post-Roman art (e.g. on a series of Burgundian buckles, as Lindenschmit, *Die Alterthümer unserer heidnischen Vorzeit*, III, iii, pl. 6 1, where it may be attributed to the influence of the still Romanized Provence) the theme was evidently one which appealed to barbarian tastes.

Adam and Eve, tempted in the garden. Two instances, nos. 35 and 91, Cahors and St.-Guilhem-le-Désert, belong to the Toulouse-Rodez group; a third is the very late specimen, no. 72, Narbonne 13. The motif appears locally on the same four pre-Visigothic sarcophagi as does that of Daniel.

Jonah, cast from the boat and lying beneath the gourd. Only on no. 9; Agen 9; cf. Le Mas-d'Aire, Le Blant, no. 120, pl. XXVI. But see p. 97 for the use of similar figures derived from elsewhere.

The Holy Sepulchre. On nos. 81 and 116, Rodez 1 and Toulouse 22, almost identically. The iconography is unusual, but the figures at either side are the St. Peter and the St. Paul of the ordinary figured series, e.g. on the front of the same Rodez sarcophagus.

Christ teaching. Once only, on no. 81, Rodez 1. Also unusual iconography.

The three Hebrews, standing in the fiery furnace. Twice, on nos. 91 and 121, St.-Guilhem-le-Désert and Toulouse 27. The scene was used by the Arlesian sculptors (e.g. at Manosque, Le Blant, no. 204, pl. L), and appeared upon a sarcophagus, now lost, in the church of St. Caprais at Agen (Le Blant, no. 111, with drawing taken from St.-Amans, *Essai sur les antiquités de Lot-et-Garonne*).

Abraham sacrificing Isaac. On no. 97, Toulouse 3, where the arrangement is traditional although the ram has puzzled the sculptor; and on no. 68 *a*, Narbonne 9 *a*. Local pre-Visigothic examples at Lucq-de-Bearn and St.-Orens-d'Auch, and in a slightly different form at Le Mas-d'Aire (see p. 95, n. 2); also at Clermont-Ferrand (Arlesian; Le Blant, no. 75, pl. XVII, 3).

Various miracles. Found on five sarcophagi, all of the Toulouse-Rodez group, nos. 48, 55, 71, 96, and 116, Loudun, Le Mas-St.-Antonin, Narbonne 12, Toulouse 2 and 22. The following scenes are represented: Moses striking water from the rock (cf. the Arlesian series *passim*; in the Visigothic area at Narbonne and Toulouse, Le Blant, nos. 176 and 154, pls. XLV, 1, and XL, 2), The Creation of Man (cf. Garrucci, CCCLXXXVI, 2, and IX, 7; the type derives from a well-known Prometheus type, Le Blant, p. 80, n. 4, and refs.), The Healing of the Blind Man (cf. the Arlesian series *passim*; in the Visigothic area at Cahors and Toulouse, Le Blant, nos. 88 and 154, pls. XX and XL, 2), The Miracle at Cana (cf. the Arlesian series *passim*; also at Marseilles, no 1), The Miracle of the Loaves (cf. the Arlesian series *passim*; in the Visigothic area at Toulouse, Le Blant, no. 154, pl. LX, 2), The Miracle of the Widow's Child (as distinct from the raising of Lazarus, which is not found; see Le Blant, *Arles*, p. 1, and Garrucci, CCCLXVII, 1, at Rome, which contains both scenes). All these scenes are more or less common in the fourth-century cycle Reminiscences of other similar scenes are perhaps to be seen, e.g. on nos. 96 and 116, Toulouse 2 and 22, but if so they are too degenerate for recognition.

Pastoral scenes occur upon eleven sarcophagi of the Visigothic series.[1] They are of a simple character and several figures recur in them, notably a shepherd, leaning with crossed legs upon his staff, and a figure reclining with one arm thrown back above its head, the former of which occurs no less than seven times, the latter three. In their Visigothic context these poses have no obvious significance and they must derive from some pre-Visigothic model. That model is almost certainly to be found in the pagan sarcophagi decorated with scenes from the Endymion cycle, of which a fine example, now in the Louvre, was found at St.-Médard-d'Eyran near Bordeaux[2] (pl. XXXIII, 8). Both figures were employed in classical times as stock types for Endymion; and it is interesting to notice that the reclining figure had already been adopted elsewhere by Christian artists for the portrayal of Jonah beneath the gourd. The latter indeed occurs in the Visigothic series (see p. 96); but in its Christian form it lacks the pastoral context of the group here considered; and the Pan-pipes on nos. 58 and 95, Montpezat and Toulouse 1, further indicate for these a derivation from pre-Christian models.

Cherubs harvesting the vintage are found upon three Visigothic sarcophagi,[3] in each case in conjunction with the pastoral figures just described. This scene, adopted from pagan antiquity by the Christian Church, is found upon at least one previous sarcophagus within the Visigothic area, at Narbonne.[4] So too the two horsemen upon no. 100, Toulouse 5 (pl. XXXIII, 5), can hardly be other than Castor and Pollux, whose representation upon some Gallo-Roman monument had caught the craftsman's fancy.

The central figure of the same scene belongs to the third class of figured representations which are found on Visigothic sarcophagi. A huntsman, with cloak flying in the wind, is spearing a beast, a bear, boar, or lion (pl. XXXIII, 2). The huntsman invariably faces to the right and the details of pose are strangely constant. The scene reappears, flying cloak and all, on objects as diverse as an ivory pyxis at Sens[1] and a Vandalic brooch from Algeria.[2] It evidently has behind it a long history. In the present instance, however, there can be little doubt of its immediate ancestry. The same cloaked huntsman is to be found upon a group of pre-Visigothic sarcophagi depicting hunting scenes, of which no less than three are extant within the Visigothic area, at Béziers, at Cahors, and at Déols.[3] With these sculptural models at hand it is hardly necessary to look farther afield; and it is perhaps significant of the attitude of the Visigothic craftsman to note that the fine twelfth-century tympanum of St. Ursin, Bourges (Deschamps, *La Sculpture française à l'époque romane*, pl. 58), is unquestionably derived from a member of the same group of fourth-century hunting sarcophagi. In each case the maker was seeking inspiration from an obvious source, the extant local remains of classical antiquity.

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[1] Auch 2, Cahors, Loudun, Le Mas-St.-Antonin, Montpezat, Narbonne 12, Poitiers, Toulouse 1, 5, 26, 27.

[2] Espérandieu, *Recueil*, ii, 1240. The resemblance of the Visigothic fragment no. 19, Auch 2, to this sarcophagus is sufficiently close to suggest direct derivation.

[3] Cahors, Loudun, and Poitiers.

[4] Espérandieu, *Recueil*, i, 637.

[5] It occurs five times—Toulouse 1, 5, and 27, and Clermont-Ferrand (twice).

The fourth and largest group consists of full-length draped human figures. The number of varieties of setting in which they appear is at first sight bewildering. But a closer examination reveals that the basic motif is constant throughout and consists of Christ flanked by the twelve apostles. The artist has not always found room for the full number but throughout the series the same individual figures recur; and although the stylistic treatment varies inevitably with the skill of the artist, details of pose and of drapery persist long after changes of context have robbed them of all meaning. It is these factors that reveal the source from which the figures were derived. There can be little doubt that it was from the Massiliote representations of Christ's mission to the apostles already described that the Visigothic craftsman drew this important element of his decorative repertory. Figure-style is a notoriously slippery subject, and the apparent stylistic resemblances between these Massiliote sarcophagi (especially pl. XXXIV, 2) and such Visigothic examples as no. 81,

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[1] Peirce and Tyler, *L'Art byzantin*, i, 160, late fifth century.

[2] *B.M. Anglo-Saxon Guide*, p. 152, fig. 206. It was perhaps derived locally, e.g. from a fine mosaic at Uthina in Africa Proconsularis on which a huntsman, nude but with flying cloak, spears a boar (Rostovtzeff, *Social and Economic History of the Roman Empire*, pl. XLVII, 1).

[3] The history of this group of hunting sarcophagi has never been worked out. It is, however, clear that in its latest form it came within the Arlesian and north Italian complex. To this group belong the specimens at Ajaccio, Corsica (Espérandieu, *Recueil*, i, 22), Arles (*op. cit.*, i, 178), another at Arles (unpublished), Béziers (Puig y Cadafalch and others, *L'Arquitectura romànica a Catalunya*, fig. 78), Cahors (pl. XXXIII, 3), Clermont-Ferrand (Le Blant, p. 68), Déols (Espérandieu, *Recueil*, ii, 1560), Gerona (Puig y Cadafalch, *op. cit.*, fig. 77), Le Luc near Fréjus (Espérandieu, *Recueil*, i, 29), Orange (Espérandieu, *Recueil*, i, 267), Rome (Lawrence, *Art Bull.*, June 1932, fig. 63), and Naples (Museum, inv. no. G. 766). The cloaked huntsman is found on those at Arles, Cahors, Déols, Le Luc, and Rome. The immediate predecessors of the group are also Western, e.g. Barcelona (Puig y Cadafalch, *op. cit.*, fig. 74), Reims (*Congrès Arch. Fr.*, 1911, 14, and plate), and Rome (an example from the Borghese collection, now in the Louvre); but ultimately they seem to derive from the East and there are obvious links with such objects as the Sidamara sarcophagus.

Rodez I (pl. XXXVI, 4), may in themselves have little objective value. But when it is further observed that all the tricks of pose and gesture found in the Visigothic series can be paralleled in the Massiliote figures, and that an exhaustive search has failed to reveal any other group of fifth- or sixth-century sculpture which in any way fulfils these conditions,[1] the derivation of one from the other does seem to be highly probable. Of all the centres of late Roman culture in the western Mediterranean Marseilles was at once the nearest and in the fifth century the most vigorous. It would indeed be a matter of surprise had it contributed nothing to the art of its neighbours in Languedoc and Aquitaine.

The derivation of this group of figures from the Massiliote sculpture is of prime importance for the chronology of the Visigothic sarcophagi. For it has already been stressed that the main body of the Visigothic sarcophagi form an indivisible series, and it is impossible to isolate as a later introduction into an established sculptural tradition this, one of the most widely and diversely employed of its motifs. In Section I it was shown that the *terminus post quem* of the Massiliote sculpture there discussed was *c.* A.D. 415, and that this figure, which is an outside limit, may well in fact be a good deal too early. Allowing a minimum period for its establishment at Marseilles, and considering also the political upheavals of south-western France in the decade 410–20, it will be seen that *c.* 425 as the date of the earliest Visigothic sarcophagi provides a generous margin of error and that in all probability the figure should be nearer to A.D. 450.

For the conclusion of the series there is little direct evidence. St.-Bertrand-de-Comminges was sacked and deserted in A.D. 586. That it had been in close contact with the Visigothic sculptural centres (the Garonne afforded cheap and easy transport) is sufficiently apparent from the surviving fragments of typical sarcophagi at St.-Bertrand itself and at Valcabrère. Yet the sarcophagus of Aemiliana (no. 87), while clearly derived from Visigothic models, has already strayed far down the road of isolated specialization and degradation which was the fate of succeeding sculpture in Aquitaine (see p. 101). By 586, then, true Visigothic work was here long dead.

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[1] An exception must be made of a sarcophagus at Tarragona (Kingsley Porter, *Spanish Romanesque Sculpture,* i, pl. 3 A) which has obvious affinities with the French Visigothic figured series. It stands alone, however, in the Spanish series, and must presumably be regarded as derivative from the French. With the single exception of no. 129, Ampurias, the sculpture here termed 'Visigothic' does not seem to be found in the Spanish portion of the Visigothic empire. This is hardly surprising when its fundamentally non-barbarian, late Roman character is appreciated. The fifth-century sculptors in Spain, as well as in France, were drawing largely upon provincial Roman art for their inspiration, and their work inevitably reflected rather the long-standing differences already visible in the sculpture of the classical period in the two countries than the more recent, artificial, political unity.

The same conclusion is indicated by the distribution of the Visigothic sarcophagi (fig. 4). The absence of any major regional distinction between those of Aquitaine and those of Languedoc can mean only that the great majority at least were made before the break-up of the French Visigothic empire in 507. That event saw the absolute severance of the close political and cultural contacts between Bordeaux, Toulouse, and Narbonne, which are so clearly implied in the sculpture which they produced. That the often misleading equation of political and artistic events may in this case be applied with safety seems clear from the history of the other late Roman schools of sculpture in the West. Ravenna and Marseilles served only the narrow areas of which they were the political centres. The fifth-century late Roman sculpture of Spain awaits study, but its close dependence upon the regions where Rome retained a hold is immediately apparent. It is perhaps more than a coincidence that the distribution-map of the French sarcophagi so closely coincides with the boundaries of the Visigothic empire in France in the late fifth century. Moreover, the subsequent history of sculpture in the south-west (see the next section, 'Post-Visigothic Sculpture') shows clearly enough that the line which Clovis drew between

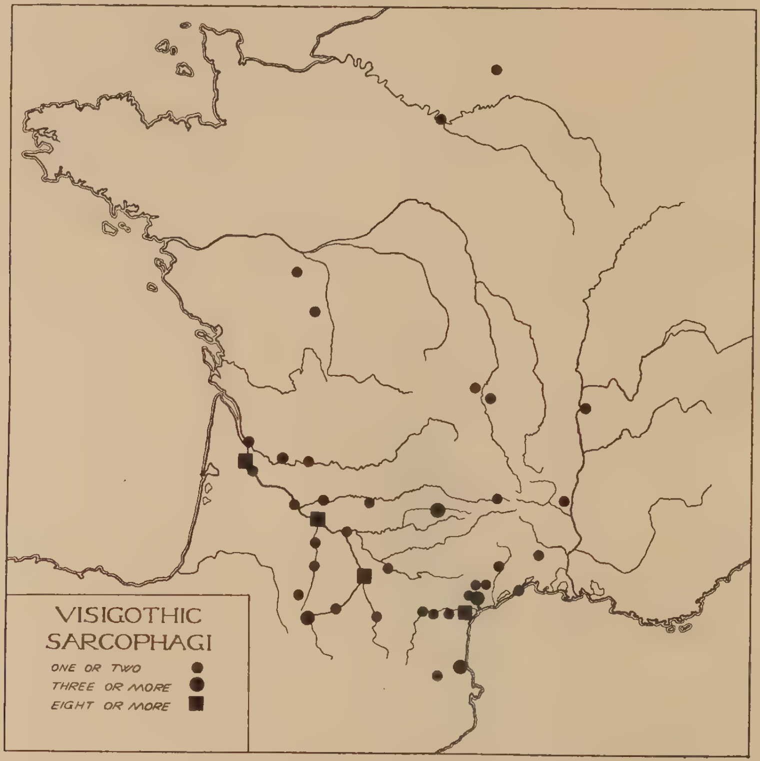

Fig. 4. Distribution of Visigothic sarcophagi (nos. 34 and 129–31 are not included on this map)

Aquitaine and Languedoc did in fact result in an artistic cleavage such as is entirely lacking from the Visigothic series. The absence of development in the latter was due to the short duration of their manufacture; for all the evidence suggests the great majority were made between *c.* A.D. 450 and 507, i.e. roughly during the second half of the fifth century.

Of the curiously individual style, so unlike any foregoing provincial work in the south-west, little need here be said. For this changed style the dislocation of the earlier fifth century no doubt provides the occasion, if not an explanation. It has obvious affinities with other contemporary late Roman sculpture in the West. And it may be that there is here to be sought some contribution from the autochthonous art which found its expression during the Gallo-Roman period in such works as the stelae and altars of the Upper Garonne and the Eauze sarcophagus.[1] These are, however, matters which lie outside the scope of this paper. More relevant is the light which is thrown upon conditions of life in south-west France during the fifth century. Not only does their production in such numbers illustrate the state of relative stability and opulence which prevailed at the heart of the Visigothic kingdom, thus affording a valuable check upon the scanty literary evidence, but it will be seen also that the distribution (fig. 4) is thickest in precisely those parts where Roman civilization had been most intense, whereas it avoids certain areas, e.g. Novempopulania, where the Visigoths are known to have settled.[2] The conclusion would seem to be that a considerable portion at least of the clients, who purchased these ornate coffins, were provincials of the old stock settled on the estates which they had possessed before the arrival of the Visigoths.

Post-Visigothic Sculpture

(a) *In Aquitaine*

Of the two areas into which the Visigothic empire was divided after 507, culturally the more backward was that of Aquitaine. Of the Visigothic sarcophagi proper it seems likely, for reasons already stated (p. 100), that production ceased almost immediately. On the other hand the Franks had no sculptural tradition of their own with which to replace them. It is not improbable, therefore, that a certain number of crudely wrought sarcophagi of Visigothic shape, decorated solely with columns at the corners or some form of debased chrism, may be assigned to this period. With one exception (no. 17, Arles-sur-Tech) they are to be found within Frankish territory, mostly on the middle Garonne. Being of such a simple form they may well have lasted for a long time. They are not, however, here listed separately; for it cannot be ignored that in particular instances crudity may be evidence of poor craftsmanship, and not of late date. They are of interest chiefly for the light which they throw upon the artistic degeneracy of Toulouse at this period. It is abundantly clear that in and after the sixth century the region about Toulouse ceased to be a centre of positive influence and became rather a wedge of backward country, which isolated the south-west from its most natural approach to the Mediterranean and its ideas. There is a considerable body of evidence to show that such outside influences as reached Aquitaine at this time came from two directions—from central France, which was in contact with Lyons and the south, and from the Atlantic ports, which seem to have been in direct communication with the Mediterranean world.[1] Of this change the artistic primacy of Poitiers in the seventh century is the natural expression.

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[1] Espérandieu, ii, 1048; his illustration unfortunately shows none of the low-relief decoration with which it is covered.

[2] This point was suggested to me by Mr. C. E. Stevens.

It was only with the renaissance of sculpture in the tenth and eleventh centuries that Toulouse again becomes important. Then, just as the Romanesque sculptors of Provence, surrounded as they were by the monuments of classical antiquity, carved the majority of their ornament in direct imitation of classical models, so those in the south-west drew deeply from the fifth-century sarcophagi, which formed the largest single body of local material left to them by antiquity. Perhaps the most striking instance of all is the lintel of the famous portal at Moissac. The cusps on the face are decorated with Visigothic acanthi, while the under-surface bears an exact copy of the chrism and acanthus-scroll as it appears, for example, on no. 104, Toulouse 10.[2] Instances could be multiplied. But this will suffice to show that Visigothic sculpture, so negligible a factor in the sixth century, came once more into its own in the eleventh, and was one of the elements which contributed to the variety of the Romanesque sculpture of south-western France.

(b) *In Mediterranean France*

In the Mediterranean coastal strip Visigothic rule remained substantially unbroken until the Arab invasion of the eighth century, and a certain number of sarcophagi were undoubtedly made after the severance of Aquitania in A.D. 507. They were, however, few in number,[1] and production cannot have lasted long. At once the most striking and the most important is no. 65, Narbonne 13 (pl. XXXV, 1–5). Unlike the majority of the series there are traces here of development of the motifs, notably of the acanthus. A similar relaxation of the strict Visigothic forms is visible on the lid of no. 115, La Valbonne (pl. XXXVI, 1–2), on nos. 62–3, Narbonne 3–4, and on the fragment at Mende. More striking evidence of late date, however, is its incorporation, alone of the Visigothic series, of a new motif, one of those patterns of interlaced ribbon-work which are so characteristic of Frankish and of Lombardic sculpture and were to remain the stock decorative forms both in France and in Italy until they were absorbed into Romanesque art. If the chronology proposed for the Visigothic sarcophagi is correct, this example, however tardy, can hardly be later than A.D. 550. The differences from the main series are too slight, the number of sarcophagi upon which they occur too few, to permit of a later dating. The conclusion is of considerable importance, for it has always been assumed that French interlace-work belongs at earliest to the seventh century. That assumption rested upon no internal evidence; and in so far as it had a foundation, it lay in the supposed priority of the Italian ribbon-work. Now, however, the earliest use of the interlace in France can be shown to go back to the middle of the sixth century. The moment is perhaps significant. In 534 Burgundy fell victim to Frankish expansion. Provence followed three years later and the Frankish empire reached to the Mediterranean. The Franks certainly did not bring this sculpture with them. But it may well be more than coincidence that their arrival coincides so closely with the most drastic change of form and spirit that south French sculpture had ever known.

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[1] This evidence cannot here be discussed, but the writer hopes to do so on some future occasion.

[2] So exact is the resemblance that critical scholars, e.g. Mayer Schapiro, 'The Romanesque Sculpture of Moissac', *Art Bulletin*, xiii, 1931, 493 ff., have believed the lower face to be part of an early Christian monument re-used. The presence, however, of both motifs, similarly related, on another lintel now in the museum at Cahors (pl. XXXII, 8) can only indicate that the two motifs are contemporary; and of the Romanesque date of the front of the Moissac lintel there can be no question.

The frequent use of the chrism in the Romanesque art of Aquitaine further illustrates this tendency, which can be seen also in the capitals at Conques or on objects such as the eleventh-century sarcophagus (perhaps a re-used lintel) in the Musée des Augustins, Toulouse, illustrated on pl. XXXV, 7.

Whether this ribbon-work sculpture represents the introduction into sculpture of motifs already familiar to the other arts of the northern peoples, or whether the invaders adopted a current classical pattern, which they found congenial and adapted to their somewhat meagre sculptural capabilities, cannot here be discussed. It is, however, relevant to observe that in Italy the Ostrogoths, like the Visigoths in the west, do not seem to have employed the interlace. Examples of the purely classical interlace do occur, e.g. the early sixth-century choir-screen panels of S. Clemente, Rome (Haseloff, *Pre-Romanesque Sculpture in Italy*, p. 36, pl. 42);[2] but it is not found upon Ostrogothic metal-work (Åberg, *Die Goten und Langobarden in Italien*, p. 40), nor can any examples of the type of interlace-sculpture characteristic of the seventh and eighth centuries be dated before the arrival of the Lombards. It is with this later 'barbarian' interlace alone that the French sculpture can be compared; and it is, therefore, of some importance to note that the *terminus post quem* of the Italian interlace-work, A.D. 585, the year in which the Lombards invaded Italy, falls nearly half a century later than the date here proposed for the introduction of similar motifs into French sculpture.

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[1] Nos. 49, 65, and 115 (Mende, Narbonne 13, and La Valbonne) alone are certainly members of this late group. Other sarcophagi at Narbonne illustrate peculiarities (see Appendix) which perhaps suggest a similarly late date.

[2] The San Clemente panels are of purely Byzantine type.

This conclusion does not prove that the French interlace-sculpture derived nothing from Italy. Upon the Riviera in particular interaction was inevitable;[1] and at a later date, in the eighth and ninth centuries, there were indubitable contacts between Italy and the Atlantic ports. Still less does it show that the Italian interlace-work was derivative from France. It does, however, prove that at least one of the many interlace-motifs that were absorbed into the sculptor's *corpus* of decorative forms was of south French origin.

Dated examples of interlace-work in France are almost non-existent. Particularly important therefore is a sarcophagus in the Alyscamps at Arles (pl. XXXVI, 6), to which a sixth-century date can be assigned. The interlaced four-fold knot, already encountered on no. 65, Narbonne 13, is of course in itself no criterion of date. But the second panel from the right can only be derived from the Visigothic acanthus-'tree' (cf. pl. XXXVI, 1), and can have been made little, if at all, after the production of Visigothic sarcophagi had ceased; for nowhere in the Provençal Dark Age sculpture is there any hint of that revival and adaptation of dead motifs which is so characteristic of the Romanesque craftsman, nor indeed would a Visigothic model have been a natural choice to an Arlesian workman. This sarcophagus can therefore hardly be later than the second half of the sixth century, and as such it is an important object. Not only does it provide certain criteria for the identification of early interlace-motifs,[2] but it also provides a fixed point for the chronology of the numerous monuments upon which the cross inscribed within a circle plays an important part.[3]

A comparison between no. 65, Narbonne 13 (pl. XXXV, 1-5) and the Alyscamps sarcophagus (pl. XXXVI, 6) affords as clear a picture as could be wished of the changes that were taking place in the middle of the sixth century. The former, however decadent, is, with the exception of the intrusive knot-motif, still wholeheartedly in the late classical tradition. The latter already bears the unmistakable stamp of the barbaric sculpture of the seventh and eighth centuries. With the inclusion of Marseilles within the Frankish empire, Provence passed into the Dark Ages. Of the succeeding sculpture little can here be said. Two contrary tendencies are visible—a strong bias towards regionalism, which manifests itself in the appearance of a number of small semi-isolated, local groups of sculpture: and against this a certain stylistic uniformity which sprang from the all-pervading diffusion of the interlace. In neither of these tendencies is the influence of Visigothic sculpture apparent. Its importance for the study of later sculpture is that it formed the link between the sculpture of classical and of Dark Age France. Only by the establishment of a secure chronology for the Visigothic material is it possible to examine with profit the tangled obscurity of the sculpture which succeeded it.

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[1] The 'catherine-wheel' scroll (e.g. De Lasteyrie, *L'Architecture religieuse en France à l'époque romane,* fig. 200 from Bordeaux) is probably an example of a motif imported into France from Italy. A late sixth-century date is certain for the sarcophagus at Ravenna (Peirce and Tyler, *L'Art byzantin,* ii, 152 *c*). Other French examples occur at Aix-en-Provence, at Vienne, at Lyons, and at Bordeaux.

[2] Closely related examples occur in the museums at Arles and at Narbonne, upon each of which the interstices of the design are filled with foliate motifs similar to those on the Alyscamps sarcophagus. Cf. pl. XXXVI, 3, a slab at Narbonne.

[3] E.g. the stone and plaster sarcophagi of Burgundy and of northern France. For the use of this motif in late sixth-century Provence, cf. the tomb of Boethius at Carpentras, dated *c.* A.D. 600 (Le Blant, pl. LVI, 2). Previous to this date it does not seem to occur.

APPENDIX

The following list contains all the examples of Visigothic sarcophagi known to the writer. There are bound to be omissions from any such list; but it is probably sufficiently comprehensive to allow of generalizations, both positive and negative, being made with some confidence. This is true both of the distribution of individual examples and of the decoration of the series as a whole, whose stylistic uniformity is singularly helpful in this respect. In several instances it has in fact proved possible to identify with certainty the character of sarcophagi, now destroyed, from the bare descriptions of earlier antiquaries.

The bibliography (for abbreviations used, see p. 80) is not exhaustive. In particular, references to inaccessible local publications are omitted where these are given by the standard works such as Le Blant and Garrucci. Where, however, no reference at all is here quoted the sarcophagus is, to the writer's knowledge, unpublished.

The material is, unless otherwise stated, dull white marble. With a few exceptions the length of complete specimens varies from 6 ft. 6 in. to 8 ft. A few of the terms used perhaps require definition:

'marigold'	six-pointed flower, e.g. pl. xxxvi, 2; see p. 95.
'chrism'	the Constantinian chi-rho monogram in all its forms, e.g. pl. xxx, 3; see p. 92.
'imbrications'	the scale-pattern used on the lids, e.g. pl. xxxvii, 7.
'acanthus-"tree"'	As fig. 3, 7.
'vertical leaf'	an upright, triangular leaf-like motif, often found at the base of a scroll-pattern, e.g. pl. xxxi, 5.

A certain number of the sarcophagi listed below will be found to be described as belonging to the 'Bordeaux group' or to the 'Toulouse-Rodez' group. These indicate two groups of sarcophagi, the members of which, on account of certain common tricks of treatment, may be presumed to have come in each case from the same workshop.

The distribution of the first group points unmistakably to Bordeaux as its centre of production; the other is less strongly localized, although Toulouse is an obvious centre. Other groups could no doubt be isolated, for the sarcophagi preserved at Béziers, at Agen, and at Narbonne, all seem to possess their own peculiarities. The task would, however, be somewhat academic; and it is here sufficient to indicate that such local workshops probably existed. The fact that these were scattered as far afield as Bordeaux, Toulouse, and the Mediterranean coast only goes to emphasize the fundamental unity which must have existed over this whole area during the period of production.

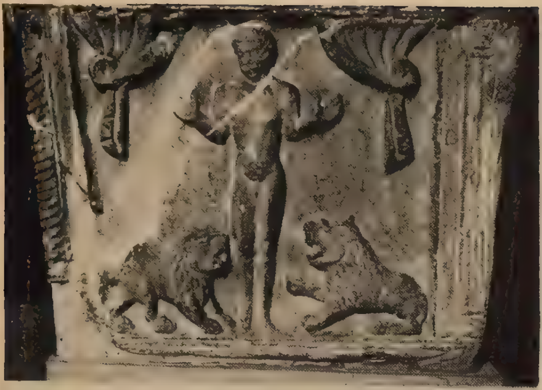
The peculiarities which mark the members of each group are individually small but cumulatively striking. The Bordeaux group is distinguished by the use of columns with three flutings, on nos. 25, 27, 52, 54, and 126; of birds, on nos. 31, 57, and 59; of rosettes, on nos. 30, 31, 33, 51, 54, 93, and 102 (also on nos. 9 and 23); of dovetailed plaques, on nos. 31, 32, and 57; of a hand upholding the wreath, on nos. 31, 32, and 57; and of a wreath tied with trailing ribbons, on nos. 32, 57, 80, 99, and 128. The treatment of the vine-scroll is often eccentric (e.g. on nos. 27, 33, and 93), and there is a tendency to multiply small, intrusive detail (e.g. notably on nos. 2, 31, and 93). The last point may perhaps be taken to indicate that the formation of the 'Visigothic' style lay rather in the Toulouse-Narbonne region, where such intrusive elements are relatively absent, than at Bordeaux. The following twenty sarcophagi may be tentatively assigned to the Bordeaux group: nos. 2, 6, 25, 27, 30–3, 51–2, 54, 57, 59, 80, 93–4, 99, 102, 126, and 128.

The Toulouse-Rodez group is distinguished by the range of figured representations. Miracle scenes, on nos. 48, 55, 71, 96, and 116 (cf. especially nos. 55 and 96), are confined to this group; Daniel is found here only on nos. 48, 55, 77, and 91; Adam and Eve on nos. 35 and 91, and on the late example, no. 72, Narbonne 13; vintage-scenes only on nos. 35, 48, and 77; the 'Jonah-Endymion' figure (p. 97) on nos. 35, 71, and 77 (the shepherd leaning on his staff is not, however, so restricted). The lid of L-shaped section, as on the normal Arlesian sarcophagus, is only found in this group, on nos. 35, 91, 96, and 116 (the lids of the rest of the group are missing), and on no. 9, Agen 9, which should perhaps be included here. An unusually close relation with Arlesian or sub-Arlesian types is also suggested by the frequency of figured scenes. The use of spiral columns is characteristic of, though not confined to, this group (cf. especially nos. 55 and 91). To the Toulouse-Rodez group may be assigned nos. 35, 48, 55, 71, 77, 81, 91, 96, and 116; perhaps also nos. 9, 97, and 121.

AGEN (Lot-et-Garonne). The Visigothic sarcophagi at Agen are known in part from the fragments preserved in the museum at Agen, in part from the work of St.-Amans, *Essai sur les antiquités du département de Lot-et-Garonne*, published in 1859 and supplemented in 1874 by Tholin, *Études sur l'architecture religieuse de l'Agenais*, 272–94. The illustrations given by St.-Amans are extremely naïve but in no case can the character of the object described be called in question.

1. AGEN 1. In the museum.

Front of three panels, separated by fluted columns. Centre vine-scroll and acanthus-'tree', springing from a chalice. To r. and l. four sub-panels of V-strigils. Ends as side-panels. Probably the same as St.-Amans, *op. cit.*, vi, pl. II, which was employed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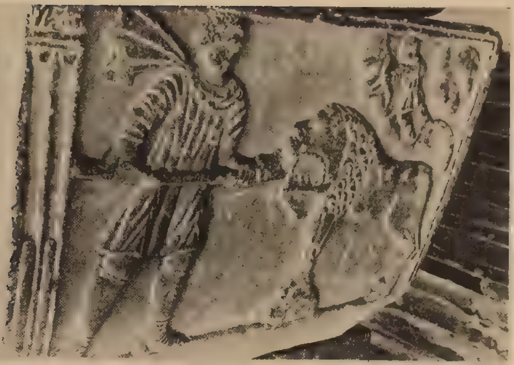
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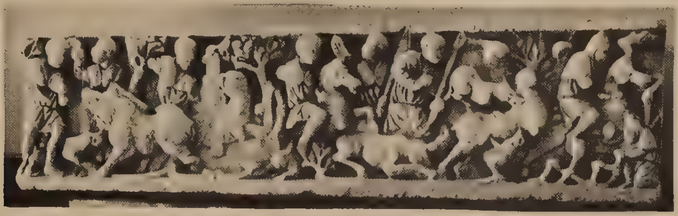
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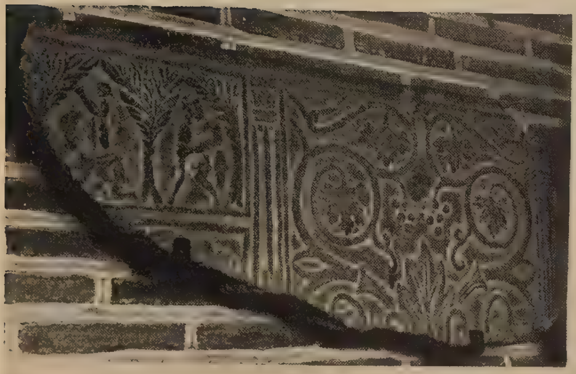
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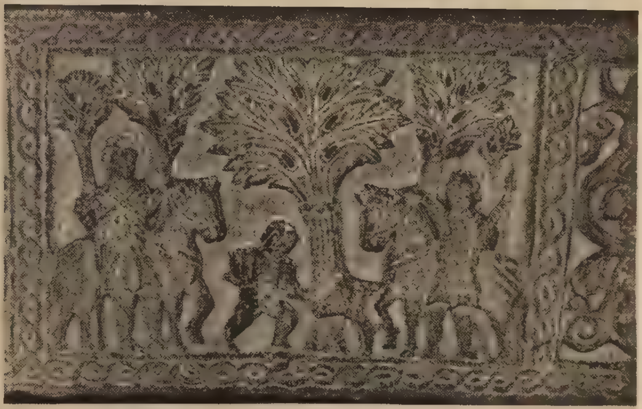
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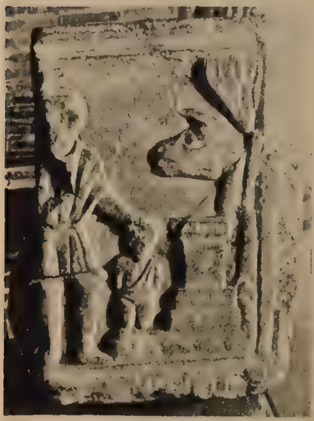
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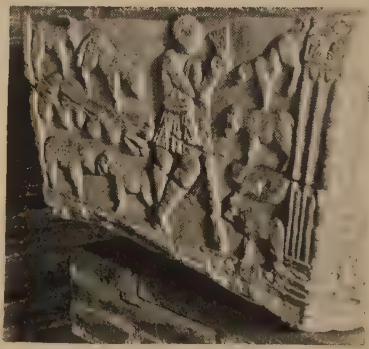
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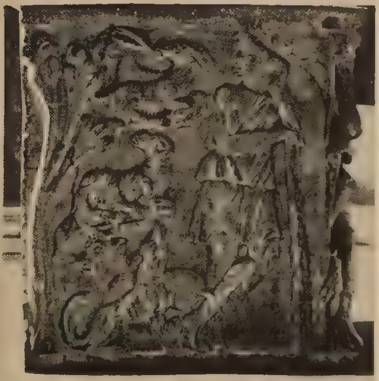
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1. No. 55, Le Mas-St.-Antonin. 2. No. 95, Toulouse 1. 3. Late fourth-century sarcophagus at Cahors (see p. 98, n. 3). 4. No. 100, Toulouse 6. 5. No. 99, Toulouse 5. 6. No. 97, Toulouse 3. 7. No. 95, Toulouse 1. 8. Third-century Endymion-sarcophagus from St.-Médard-d'Eyran (see p. 97)

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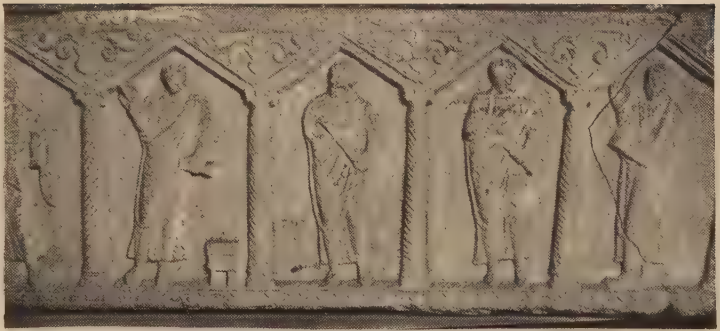

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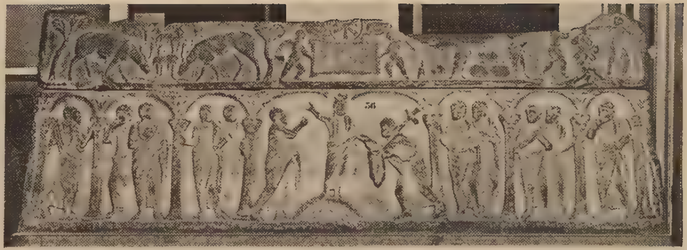

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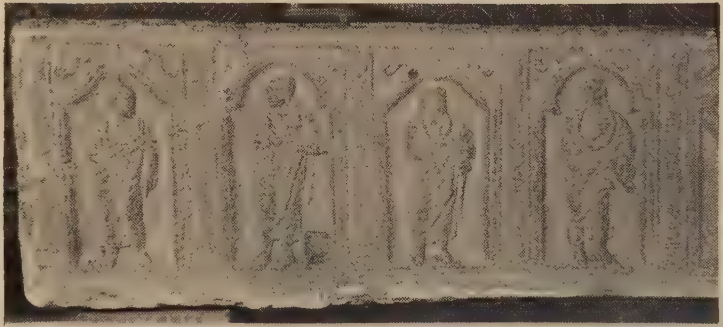

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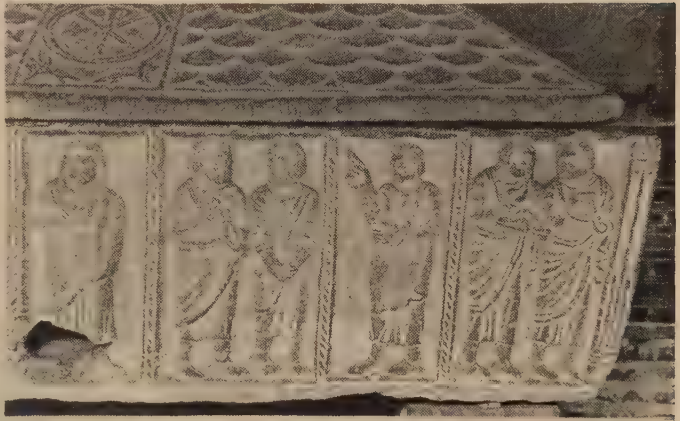

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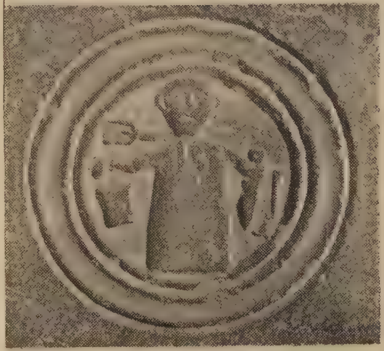

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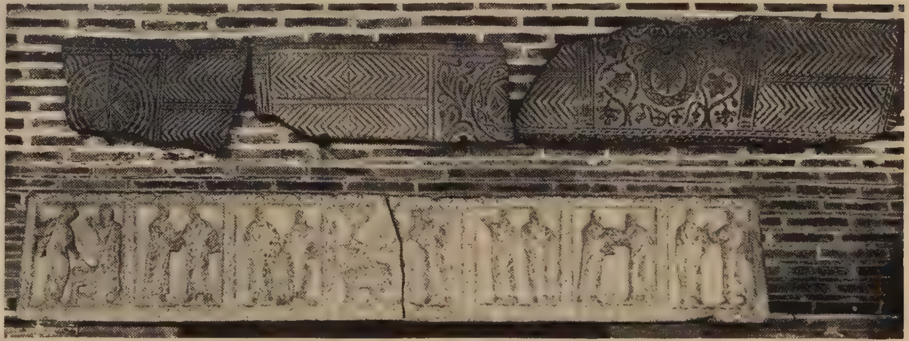

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1. No. 98, Toulouse 4. 2. Sarcophagus at Marseilles, no. 1 (*Photo. Musée Borély, Marseilles*). 3. No. 97, Toulouse 3. 4. No. 95, Toulouse 1. 5. No. 115, Toulouse 21. 6. No. 96, Toulouse 2, and (above, r. to l.) nos. 107–9, Toulouse 13–15

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as an altar in the cathedral until 1812. The lid, now lost, had a five-panel front of marigold, acanthus-'tree', and vine-scroll, ends of acanthus (as fig. 3, 6), back imbricated.

2. Agen 2. In the museum.

Front, chrism within a wreath, flanked by W-strigils and a column at each end. At each end a marigold and W-strigils. Lid, imbricated front and back. At each end a chrism, within a circular cord-moulding, the corners filled with unusual leaf-and-rosette designs. Probably that referred to by Tholin, *op. cit.*, 283–4.

This sarcophagus belongs to the Bordeaux group.

3. Agen 3. In the museum.

Body plain save for four small circular corner-columns. No lid. Cf. no. 119, Toulouse 25. Probably very late.

4. Agen 4. In the museum.

Two fragments of an arcaded front with fluted columns and triangular-headed arches. Beneath the arcade acanthus-'trees' (very distorted); in the spandrels small acanthi.

5. Agen 5. In the museum.

Two panels from a front of three panels. Centre, vine-scroll springing from a chalice with a vertical leaf; end-panels, vine-scroll springing from an acanthus.

6. Agen 6. In the museum; formerly used as paving in church of St. Caprais.

Two fragments of a front of three panels separated by columns. In each is a cupid in the middle of a vine-scroll. The columns each have three flutings and an unusual capital.

Le Blant, no. 113, reproducing the drawing of St.-Amans, which is in detail very inaccurate. One of the cupids should face to the front, and both are of very clumsy execution.

This sarcophagus belongs to the Bordeaux group.

7. Agen 7. In the museum; formerly used as paving in church of St. Caprais.

Left-hand portion of a badly worn sarcophagus-front containing originally seven panels with alternately one and two figures of apostles, the single figures between parted curtains.

Le Blant, no. 112, reproducing the drawing of St.-Amans.

8. Agen 8. In the museum.

Two fragments of small vine-scroll panels.

9. Agen 9. In the church of St. Caprais. Traditionally ascribed to Regnovald, a general of Gontran (*flor.* A.D. 581–4, Gregory of Tours, vi, 12, and vii, 10).

An L-shaped lid of five panels separated by four columns. Centre two cupids supporting a chrism within a wreath (cf. no. 33, Bourg-sur-Gironde). Flanking it to l., Jonah lost overboard, to r., Jonah beneath the gourd. In the end-panels genii with reversed torches (cf. no. 90, St.-Geny 2).

Le Blant, no. 110 and pl. xxxiii, 2; St.-Amans, vi, pl. v, 2.

This sarcophagus perhaps belongs to the Toulouse-Rodez group.

(The next seven sarcophagi are known only from the drawings and descriptions of St.-Amans and of Tholin.)

10. AGEN 10. St.-Amans, vi, pl. I, 1. Formerly in the cathedral, where it contained the body of Jean de l'Eglise; destroyed in the Revolution. It had a front of five panels, centre a chrism with acanthi at corners; to r. and l, small panels of vine-scroll. Fluted corner-columns. On the lid extensive vine-scroll ornament.

11. AGEN 11. St.-Amans, viii, pl. VIII, 2. Formerly used as an altar in St. Caprais. Very plain with four rounded corner-columns and a central chrism with no surrounding moulding.

12. AGEN 12. St.-Amans, viii, pl. IX, 1. In the cemetery of St. Caprais until 1819.
    Front and ends of S-strigils with central chrism in a plain circular moulding and at the l. end a marigold. Four rounded corner-columns.

13. AGEN 13. St.-Amans, viii, pl. IX, 2. Formerly in the cemetery of St. Caprais; disappeared before 1859.
    Front of five panels of S-strigils with rounded corner-columns; centre a small chrism in a plain circular moulding; at each end a marigold.

14. AGEN 14. St.-Amans, viii, pl. X, 1 and 2. Formerly used as an altar in St. Caprais.
    Three-panel front divided by rounded columns; centre acanthus-'tree' and vine-scroll; to r. and l., V-strigils. St.-Amans's drawing of the lid appears fanciful and may indicate ivy-scroll.

15. AGEN 15. St.-Amans, viii, pl. XI, 2. Formerly in the garden of a canon, but lost by 1859. In all essentials the same as no. 13. It may in fact well have been the same sarcophagus.

16. AGEN 16. Tholin, 282–3. A fragment in the wall of the chapter house of St. Caprais, bearing vine-scrolls and the chrism within a wreath.

17. ARLES-SUR-TECH (Pyrénées-Orientales). Outside the abbey church. Reputed to be the tomb of SS. Abdon and Sennen and credited with miraculous powers.
    Of unusually rectangular shape, decorated very simply with a debased chrism within a circular bead-and-reel moulding and a moulded plinth at the base of the front. Lid plain. For the projecting plinth cf. the simple recessed moulding on nos. 72 and 73, Narbonne 13 and 14. Both of these are late, and the present sarcophagus might even be of seventh-century date.
    Le Blant, no. 197; Puig y Cadafalch and others, *L'Arquitectura romànica a Catalunya*, i, fig. 330 (the title is in error transposed with that of fig. 329).

18. AUCH (Gers) 1. In the crypt of the cathedral. Said to have contained the body of St. Léotade, bishop of Auch, who died in 718. It is, however, of undoubted fifth-century workmanship.
    Front of five panels with fluted columns flanking the central panel and at each end. Centre a chrism within a circular moulding surrounded by ivy-rinceaux. To r. and l., (*a*) acanthi, (*b*) vine-scrolls. L. end, a vine-scroll; r. end two acanthi. Lid: front

arranged asymmetrically; centre, as central panel of body; to r. two panels, (*a*) an acanthus, (*b*) an ivy-scroll; to l. a single ivy-scroll panel. Ends and back imbricated.

Le Blant, no. 118; Coutil, fig. opp. p. 20; *Congrès Arch. de France*, 1929, Toulouse, 197 with ill.; Rupin, *L'Abbaye et les cloîtres de Moissac*, fig. 4.

19. AUCH 2. Fragment in the Convent of the Ursulines at Auch. Cast in the museum at St.-Germain.

One end of a sarcophagus, much battered, with a pastoral scene, a shepherd leaning cross-legged on his staff and before him a tree, his dog (?), and two battling goats.

Le Blant, no. 116 and pl. XXXV, 5; Espérandieu, *Recueil général des bas-reliefs de la Gaule romaine*, ii, 1044.

20. BÉZIERS (Hérault) 1. Above the south door of the church of St. Aphrodise.

Front, an arcade of nine triangular-headed panels with a spiral column at each end. Within the panels Christ and eight of the apostles. The remaining four appeared probably on the ends (cf. no. 98, Toulouse 4) but these have been destroyed or built in. In the spandrels chalices and simple foliate rinceaux.

Le Blant, no. 173 and pl. LXIII, 1.

20 A. BÉZIERS 1 A. In the cloister of the cathedral.

A simple, rectangular sarcophagus, front of poor S-strigils with a square central plaque; sides plain; at the base a recessed moulding. Very similar to no. 73, Narbonne 14, and like it probably late.

21. BÉZIERS 2. In the cloister of the cathedral. Pls. XXXI, 5; XXXVII, 3.

Front of four panels, with a fluted column at each end. Within the panels vine-scrolls springing from various forms of acanthus. Ends, each a single panel as front. Lid, front of three similar panels containing vine-scrolls springing each from a chalice. Ends, each a single panel as front. Back imbricated. Dividing ridges of cable-pattern or of a simple olive-wreath moulding.

22. BÉZIERS 3. Fragment in the cloister of the cathedral. Pl. XXX, 3.

Central panel of a sarcophagus similar to no. 38, Clairac. A chrism within a circular moulding and flanked above by parted curtains, below by two acanthi.

23. BÉZIERS 4. In the cloister of the cathedral.

Front, of irregular shape, alone preserved. Central panel a chrism within a wreath bound with ribbons; in the corners four rosettes. To either side four small panels of V-strigils.

The detail is reminiscent of the Bordeaux group. The general lay-out, however, suggests that it was made locally, and its inferior workmanship in comparison with numbers 20–2 may indicate a late date.

24. BÉZIERS 5. Le Blant, p. 131, *s.v.* no. 174, records that there was formerly in the church of St. Jacques at Béziers a marble sarcophagus bearing strigils and a chrism within a wreath. Long since destroyed, it is known solely from a sketch by Rulman (1627). This undoubtedly belonged to the Visigothic series.

Le Blant (*loc. cit.*) records from the same source several sarcophagi of this type from the Béziers area. They are probably to be identified as follows:

(*a*) 1 = no. 22, Béziers 3. Over the door of the cemetery of St. Aphrodise. 'Disparu'.
(*b*) 2 = no. 24, Béziers 5.
(*c*) 3 = no. 38, Clairac.
(*d*) 4 = no. 21, Béziers 2. Cemetery of the Magdaleine.

He also refers to one at Pradine-le-Bas near Béziers which is perhaps the same as no. 23, Béziers 4.

25. BORDEAUX (Gironde) 1. From the cemetery of St. Seurin; in the Musée Lapidaire. Pls. XXX, 5; XXXI, 8.

Front of three panels separated by four columns, each with three flutings and unusual capitals; centre, chrism within a wreath, surrounded by two vine-scrolls springing from chalices. To r. and l., two registers of V-strigils separated by a dot-and-cable moulding. Cf. no. 33, Bourg-sur-Gironde. L. end, marigold of unusual type surrounded by W-strigils; r. end missing. Lid: front of three panels; centre, a chrism in a circular moulding with curtains in the upper corners, acanthi (as fig. 3, 4) in the lower corners; to r. and l., fat ivy-scrolls. R. and l. ends acanthi, (*a*) as fig. 3, 5, (*b*) a variant of fig. 3, 2. Back imbricated.

Caumont, *Abécédaire*, fig. p. 45. Garrucci, pl. CCCLXXXVIII, 1 and 6.

This sarcophagus belongs to the Bordeaux group.

26. BORDEAUX 2. In the Musée Lapidaire.

Fragment of a dumpy arcaded front with triangular-headed arches and columns with two flutings and unusual capitals; in the spandrels, plain rinceaux and acanthi; within the arcade vine-scrolls springing from chalices to which the vine-tendrils constitute a sort of handle.

27. BORDEAUX 3. In the Musée Lapidaire.

Fragment of a front with a slender chrism enclosed in a rinceau-border, the whole surrounded by a vine-scroll. The detail is most unusual, but the vine-scroll with its grooved stems and incised details upon the leaves is very similar to that on no. 93, from Soissons. For the leaves of the wreath, cf. the small trees on no. 100, Toulouse 6.

This sarcophagus belongs to the Bordeaux group.

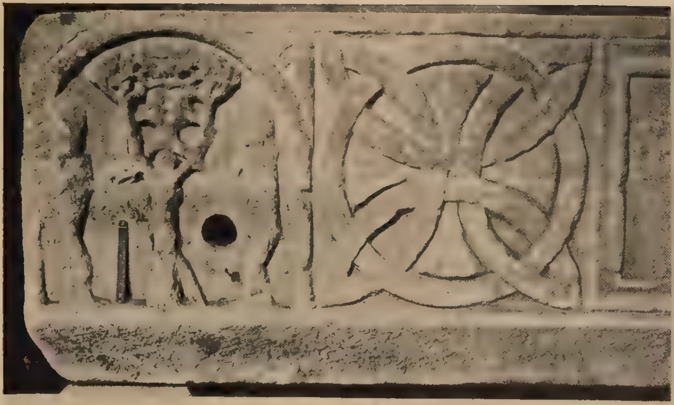
28. BORDEAUX 4. From Talence, 4 Km. from Bordeaux; in the Musée Lapidaire. Pl. XXXVII, 1.

Front of five panels; centre, a chrism in a circular moulding, surrounded by ivy-scrolls; to r. and l., acanthus- and vine-scrolls. At each end two acanthus-'trees'. Lid, front of three panels: centre, as central panel of body; to r. and l., ivy-scrolls. Ends acanthi. The whole shape is very irregular.

Caumont, *Abécédaire*, fig. 3, 5 and 6, p. 50.

29. BORDEAUX 5. In the crypt of St. Seurin.

Front of five panels separated by four fluted columns; central panel larger, a vine-scroll and triangular leaf springing from a chalice; to r. and l., each two vine-scrolls



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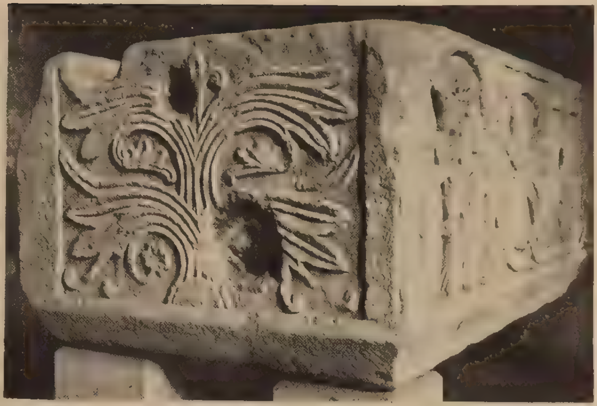

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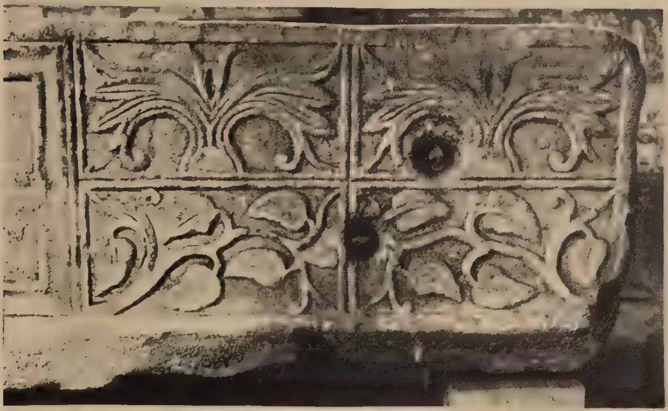

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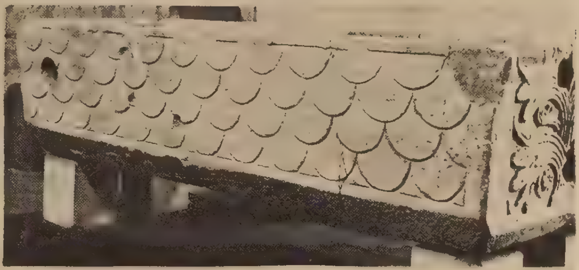

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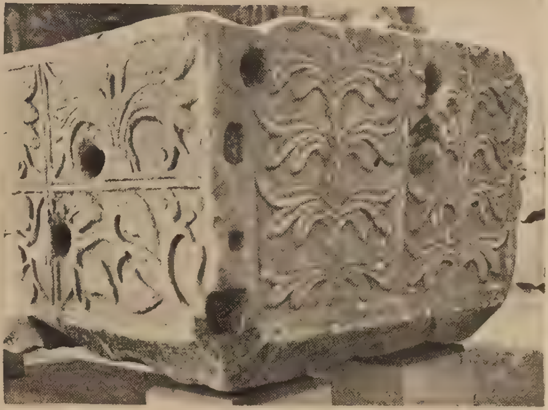

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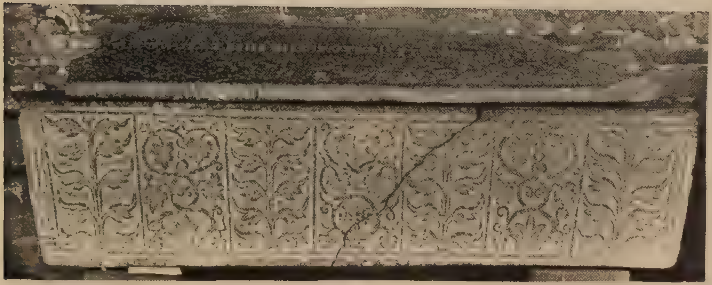

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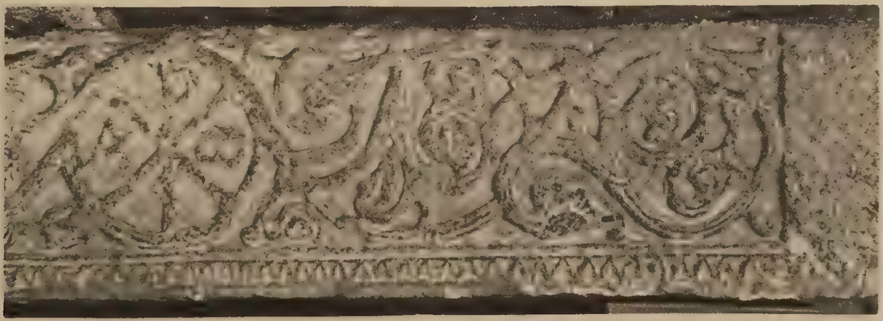

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1–5. No. 72, Narbonne 13. 6. No. 106, Toulouse 12. 7. Romanesque sarcophagus-front, perhaps a re-used lintel, at Toulouse (see p. 102, n. 2)

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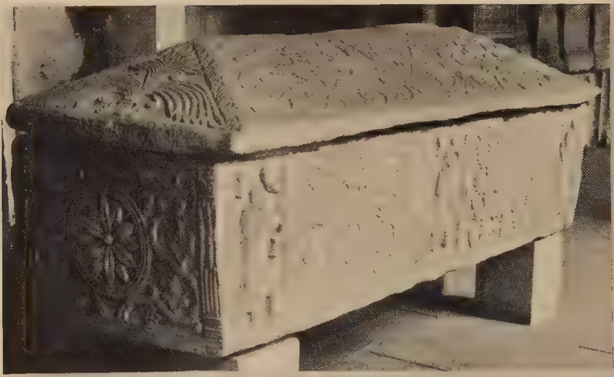

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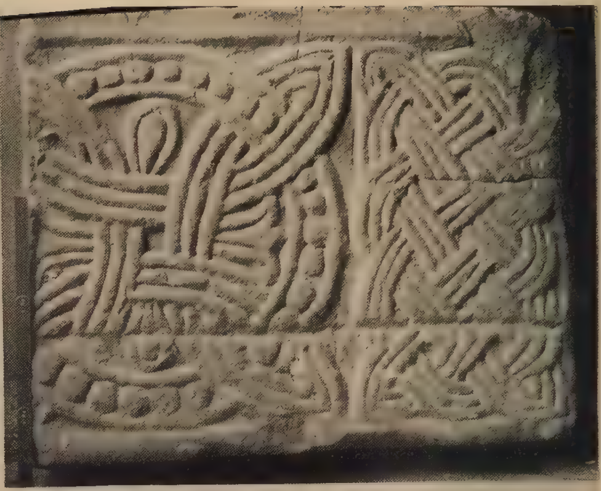

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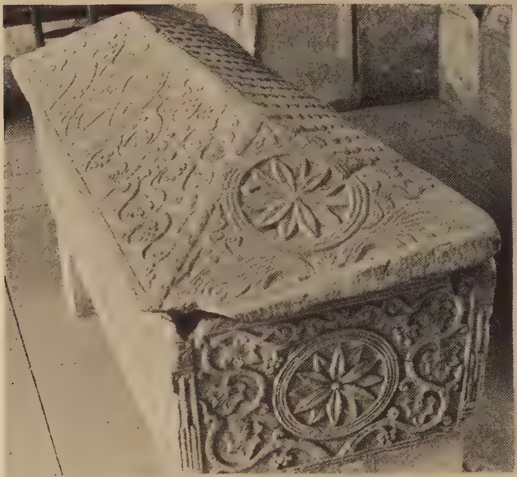

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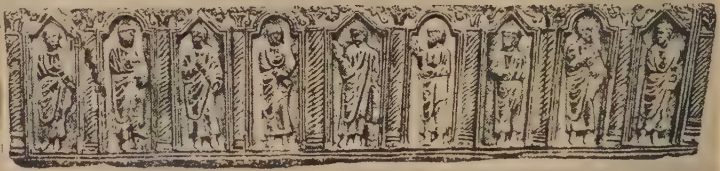

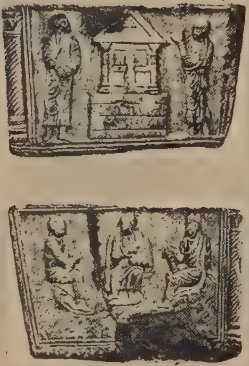

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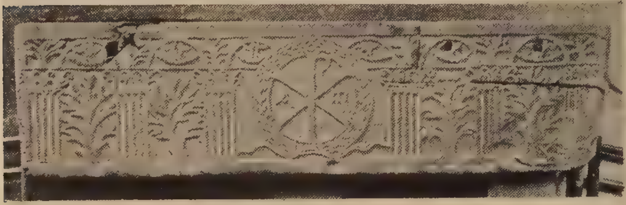

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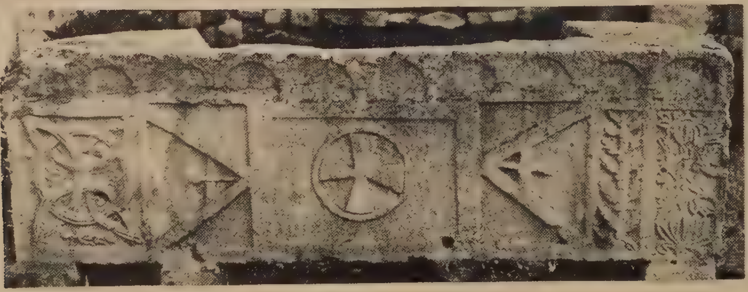

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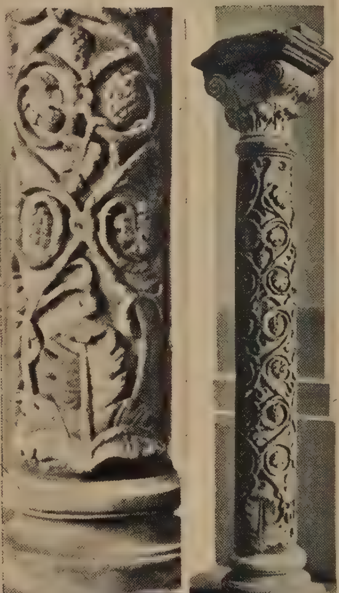

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1 and 2. No. 123, La Valbonne. 3. Slab at Narbonne, *c.* 600 (see p. 104, n. 2). 4. No. 81, Rodez 1 (after Le Blant). 5. No. 86, Rodez 6. 6. Sarcophagus, *c.* 550–600, in the Alyscamps at Arles (see p. 104). 7. A column from La Daurade, Toulouse (see p. 90)

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springing from central acanthus (as no. 28, Bordeaux 4). Sides three fluted columns and two acanthus-'trees'. Lid, front of three panels: centre, chrism within a circular moulding surrounded by ivy-scrolls; to r. and l., ivy-scrolls. Sides, acanthi (as fig. 3, 5 and 6). Back imbricated.

30. Bordeaux 6. In the crypt of St. Seurin.

Front of nine panels; centre panel larger, a chrism within a wreath, flanked above by two curtains, below by two rosettes on each side of a small plaque with dove-tail ends. To r. and l., four small panels of V-strigils. Sides as side-panels of the front. At the corners fluted columns. Lid very worn and polished; traces of imbrications.

This sarcophagus belongs to the Bordeaux group.

31. Bordeaux 7. In the crypt of St. Seurin. Pl. xxxi, 6.

A complete and highly ornamented sarcophagus. For the front see pl. xxxi, 6; the central wreath is held by a hand descending from between parted curtains (cf. no. 32, Bordeaux 8; also no. 57, Moissac). At each end a vine-scroll springs from a small indeterminate foliate object. Lid, centre, an ivy-scroll within a circular moulding, flanked by two scrolls of acanthus foliation (akin to no. 50, Maguelonne, and no. 103, Toulouse 9, but degenerate) with ivy details; at each end acanthi (as fig. 3, 5). Back imbricated.

Le Blant, no. 104, and pl. xxxiii, 1. Garrucci, pl. ccclxxxviii, 2 and 5. Peirce and Tyler, *L'Art byzantin*, vol. ii, pl. 17 b. Brøndsted, *Early English Ornament*, fig. 214. Cast in the museum of St.-Germain-en-Laye.

This sarcophagus belongs to the Bordeaux group.

32. Bordeaux 8. In the crypt of St. Seurin.

Front, an arcade of seven round-headed arches; columns rounded, spandrels alternate acanthi and plain rinceaux; centre, a fat wreath with ends knotted below (cf. no. 57, Moissac), held by a hand descending from between parted curtains (cf. no. 31, Bordeaux 7) and flanked by acanthi (as fig. 3, 4). The remaining panels consist of vine-scrolls springing from acanthi of various forms. Sides, two arches of arcading, similar but columns fluted; these contain acanthus-'trees'. Lid: front of five panels; centre, a chrism within a circular moulding flanked above by parted curtains, below by acanthi (as fig. 3, 4); to either side two smaller panels, (*a*) an acanthus-'tree', (*b*) ivy-scroll. Ends, acanthi (as fig. 3, 2 and 5). Back imbricated.

This sarcophagus belongs to the Bordeaux group.

33. Bourg-sur-Gironde (Gironde). In the museum at Périgueux. Pl. xxxi, 3.

Front of three panels, separated by columns with three flutings; the central panel is larger and contains a chrism within a wreath, upon which are three rosettes (cf. no. 9, Agen 9), flanked by vine-scrolls of an unusual type with channelled stems; to r. and l., two registers of V-strigils separated by a small ivy-scroll. At each end three fluted columns and two similar panels of V-strigils and ivy-scroll. No lid.

This sarcophagus belongs to the Bordeaux group, and is very similar to no. 25, Bordeaux 1.

34. Boville (in the Agenais). In the cellars of the Château de Massanès.
Front of three panels with vine-scrolls. At each end ivy-scrolls. No lid.
Bulletin Archéologique, December 1872; Tholin, 285.

35. Cahors (Lot). Formerly in the cloister of the cathedral, now almost entirely destroyed. A small fragment from the left end of the body is preserved in the museum. It is known from some gauche sketches made at some date before 1783 and reproduced by Le Blant.

Front of five panels, very battered, containing pastoral scenes, in part portraying cupids gathering the vintage, in the classical manner. Recognizable is the Endymion-Jonah reclining figure (see p. 97); and perhaps also the same seated figure as on no. 71, Narbonne 12. At the corners spiral columns. L. end, Adam and Eve; r. end, shepherd and sheep (somewhat fancifully depicted; the flying cloak has been mistaken for wings). Lid, L-shaped. Front of three panels: centre, cupids supporting a square plaque; to r. and l., more vintage scenes. At each end a dolphin (cf. no. 116, Toulouse 22) depicted as consuming a polyp, and two knots (the detail is again perhaps untrustworthy).

Le Blant, no. 87, pl. xxi, 1–3.

36. Carcassonne (Aude). In the Musée du Château Comtal.
A small fragment of the front of a sarcophagus similar to no. 62, Narbonne 3, with ivy- and vine-scroll panels.

37. Castelnau-de-Guers (near Pézenas, Hérault). Now in the Louvre. Perhaps originally from Aniane. Pl. xxxviii, 4.

Front of nine panels, three upright containing figures below parted curtains, alternate with pairs of small vine-scroll panels. At each end two acanthus-'trees'. Fluted columns at the corners. Lid imbricated save for a central square panel containing a chrism within a circular moulding and ivy-scrolls.

Le Blant, no. 145 and pl. xxxii, 1–2.

38. Clairac (Hérault, near Maureilhan, 8 Km. west of Béziers). In the cloister of the cathedral at Béziers. Pl. xxx, 3.

Front of three panels with a fluted column at each end. Central panel as no. 22, Béziers 3, the curtains replaced by shoots of acanthus. To r. and l., panels containing two registers of V-strigils. At either end two acanthus-'trees'. No lid.

Le Blant, p. 131, *s.v.* no. 174.

39. Clermont-Ferrand (Puy-de-Dôme). Found beneath the cathedral, and now employed as an altar in one of the ambulatory-chapels.

Front of seven panels separated by spiral columns; Christ and the twelve apostles, grouped in pairs, each below parted curtains. L. end, the huntsman without cloak, spearing a boar (see p. 97); r. end, the huntsman, with cloak flying, spearing a lion. Surrounding each face a simple rinceau. No lid.

Le Blant, no. 81 and pl. xix, 1–3. Garrucci, pl. cccxxxviii, 1–3.

The figures approximate very closely to those on no. 37, Castelnau-de-Guers, especially the figure of Christ.

40. Elne (Pyrénées-Orientales) 1. In the cloister of the cathedral. Pl. xxxii, 4.

Front, an arcade of four triangular-headed arches and fluted columns; central panels vine-scroll springing from acanthi, outer panels drooping acanthus-'trees'. In the spandrels simple rinceaux, some springing from chalices, and on the corners acanthi. Ends, two similar arches and acanthi. Shape and ornament very irregular. Fragmentary lid, front of three panels; centre, vine-scroll; to r. and l., ivy-scroll with central triangular leaf; ends as side panels; back imbricated.

Le Blant, *s.v.* nos. 195-6, mentions but does not describe this and the two following sarcophagi. Puig y Cadafalch and others, *L'Arquitectura románica a Catalunya*, fig. 339.

41. Elne 2. In the cloister of the cathedral. Pl. xxxii, 7.

Front of three panels separated by fluted columns. Centre, a vine-scroll springing from a chalice, whence springs also an acanthus-'tree' (cf. Agen 1); to r. and l., acanthus-scrolls. L. end, two acanthus-'trees' between two columns. R. end, a marigold within a circular moulding flanked by curtains and acanthi (as fig. 3, 4). No lid.

Puig y Cadafalch etc., *op. cit.*, fig. 337.

42. Elne 3. In the cloister of the cathedral. Pl. xxxi, 7.

Front of four panels, with fluted columns at each end, containing vine-scrolls springing from various forms of acanthus. At each end a single panel of similar type. No lid.

Puig y Cadafalch etc., *op. cit.*, fig. 338.

43. Elne 4. In the cloister of the cathedral. The reputed tomb of Constans, youngest son of Constantine, who was murdered at Elne in 350. It is, however, at least a century later in date.

Fragment of a front, a chrism within a wreath; to r. and l. W-strigils of poor quality.

Le Blant, no. 194.

44. Eysse (L'Abbaye d'Eysse, Lot-et-Garonne, just north of Villeneuve-sur-Lot) 1. Le Blant quotes a manuscript (*Monasticon Benedictinum*, vol. xii, fol. 166, V: Bibl. Nat., fonds latin, no. 12669) for the existence of a wonder-working tomb in the Abbey of Eysse. It had a central chrism within a wreath bound with ribbons and flanked by strigils. It was without doubt Visigothic.

Le Blant, no. 109.

45. Eysse 2. Le Blant (*loc. cit.*), 'Il y en a dans l'église un semblable de matière et d'ouvrage.'

46. Floure (Aude, between Narbonne and Carcassone). From the foundations of the church, and now in the Musée du Château Comtal at Carcassonne. Pl. xxxvii, 4.

Front of three panels separated by fluted columns. Centre, vine-scrolls springing from an acanthus. To r. and l., vine-scrolls springing from a triangular leaf. At each end two acanthus-'trees' between two fluted columns.

47. Lavaur (Tarn).

Le Blant records at second hand a sarcophagus discovered in 1866. 'La façade et les petits côtés de la tombe, de forme évasée, sont couverts d'ornements où figurent, entre des pilastres cannelés [fluted], des rinceaux de vigne s'échappant d'un vase. Au centre est le monogramme [chrism] encadré de lierres.'

Le Blant, no. 148.

48. Loudun (Vienne, north of Poitiers). In the garden of the Château de Loudun, very damaged. The reputed tomb of St. Philibert.

Front of seven panels, three upright with biblical scenes separated by two pairs of diminutive figure-scenes; the latter are now almost too battered for recognition, but the remaining figures suggest a vintage scene as on no. 35, Cahors, with which this sarcophagus has other obvious affinities; at the corners spiral columns. Of the biblical scenes, that in the centre seems to be God creating man (cf. Garrucci, pl. cccxcix, 7) derivable ultimately perhaps from pagan representations of Prometheus; to l., Moses striking water in the wilderness (cf. Arlesian sarcophagi *passim*: Le Blant's interpretation as the healing of a blind man is surely wrong); to r., very uncertain; Le Blant suggests the healing of the paralytic, another common Arlesian type. L. end, Daniel, clad in a short cloak, in the lions' den; r. end, two pastoral scenes, (*a*) above, a stag-hunt, (*b*) below, the 'Endymion' shepherd (see p. 97), sheep, trees, and a small shrine very reminiscent of those on the Massiliote tabular altars (see p. 83). Lid lost.

Le Blant, no. 95 and pl. xxiii, 1–3.

The style throughout is extremely gauche. It clearly belongs to the Toulouse-Rodez group.

49. Luc-sur-Orbieu (Aude, 18 Km. west of Narbonne).

Le Blant, no. 192 a, mentions 'un tombeau portant le monogramme de Christ'. This must be a Visigothic sarcophagus of simple type.

50. Maguelonne (Hérault, near Magalas). In the abbey church.

Front, two rows of acanthus scroll-work springing from a single central plant (as no. 104, Toulouse 10). At each end a chalice with triangular leaf and vine-scrolls. Lid, panels of vine-scrolls springing from chalices (r. end destroyed).

Le Blant, no. 170, no plate.

51. Manglieu (Puy-de-Dôme, 16 Km. north-east of Issoire).

Front only surviving. Central panel, a chrism within a wreath, flanked above by curtains, below by rosettes; rosettes also on the wreath. To r. and l. four panels of V-strigils.

Congrès Arch. de France, 1924, Clermont-Ferrand, p. 139.

This sarcophagus belongs to the Bordeaux group.

52. Martres-Tolosanes (Haute-Garonne) 1. In the church. Pl. xxx, 6.

Front of three panels separated by four columns, each with three flutings; the centre panel is larger and contains a chrism of illiterate form within a wreath and two registers of V-strigils; to r. and l., similar strigils. Ends, a column separating two panels, each with similar strigils. No lid.

This sarcophagus belongs to the Bordeaux group.

53. Martres-Tolósanes 2. In the church.

Fragment of a sarcophagus-front with fat W-strigils and a rounded column at the end. The marble is different from that usually employed, having a strong yellow tinge; but the fragment is otherwise typical Visigothic work. The difference may perhaps be ascribed to local production.

54. Mas-d'Agenais, Le (Lot-et-Garonne, on the Garonne below Agen). Discovered in 1785 on the site of the priory, where it had served for a medieval burial. Subsequently moved to the farm of La Garesse, and later to Bouglon. Present whereabouts uncertain.

Front of five panels separated by six columns with three flutings each. Centre a chrism within a wreath flanked by parted curtains above, below by rosettes. Remaining panels two rows of V-strigils separated by a simple rinceau motif.

Le Blant, no. 107 = no. 108, which he falsely distinguishes; Caumont, *Abécédaire*, fig. p. 45; Coutil, opp. p. 16, reproducing Caumont; St.-Amans VIII, pl. xvii, 1 (bad); Tholin, 288.

This sarcophagus belongs to the Bordeaux group.

55. Mas-St.-Antonin, Le (Ariège, near Pamiers). Now in the Louvre, fragmentary. Pls. xxxiii, 1; xxxviii, 1.

Front of five panels separated by twisted columns. Square central panel depicting Christ beneath parted curtains raising a dead man from a sarcophagus decorated with V-strigils (cf. no. 96, Toulouse 2), the whole within a rinceau-border. To r. and l. eight apostles by pairs within triangular-headed rinceau-frames. R. end, Daniel in the lions' den, parted curtains above; l. end, two pastoral scenes; above, shepherds (including two of the Endymion types, see p. 97); below, goats, sheep, and trees. No lid.

Le Blant, no. 193 and pl. xlviii, 1–3.

This sarcophagus belongs to the Toulouse-Rodez group.

56. Mende (Lozère). Formerly in the cathedral. Now in the museum of the Société des Lettres, Sciences et Arts de la Lozère at Mende.

Fragment of a sarcophagus-front with fluted columns and acanthus-work similar to that on the sarcophagus from La Valbonne (no. 123). It is presumably, like that example, of late date.

57. Moissac (Tarn-et-Garonne). In the abbey church.

Front of seven panels, all but the two towards each end separated by fluted columns; centre, a chrism in a circular moulding with ends knotted below (cf. no. 32, Bordeaux 8, and no. 99, Toulouse 5) and upheld by a rod descending between parted curtains (cf. nos. 31 and 32, Bordeaux 7 and 8); below, two birds drinking from a chalice. To r. and l. (*a*) an acanthus-'tree', (*b*) a vine-scroll, (*c*) another acanthus-'tree'. Each end, three columns and two similar acanthus-'trees'. Lid, front of three panels: centre, vine-scroll combined with an acanthus-'tree'; to r. and l. ivy-scrolls. R. end, a vine-scroll. L. end a combination of acanthus and triangular leaf.

Le Blant, no. 147 and pl. xxxv, 1; Garrucci, ccclxxxviii, 3–4; Peirce and Tyler, *L'Art byzantin*, ii, pl. 17 A; Rupin, *L'Abbaye et les cloîtres de Moissac*, fig. 7; Coutil, p. 18 with figure; *Congrès Arch. de France*, 1929, Toulouse, p. 511 with plate.

This sarcophagus belongs to the Bordeaux group.

58. Montpezat (Gard, 12 Km. west of Nîmes). Formerly over the door of the presbytery. Now at Nîmes in private hands.

Most of one end of a sarcophagus with two pastoral scenes; (*a*) above, three figures between trees, centre the Good Shepherd (the stock early Christian type, represented on sarcophagi at Narbonne and at Valcabrère, Le Blant, no. 122 and pl. xxxv, 3), left an Endymion-figure (see p. 97) leaning on his staff; hung upon one of the trees are Pan-pipes (cf. no. 95, Toulouse 1); (*b*) below, the usual landscape with sheep and goats.

Le Blant, no. 127 and pl. xxix, 2.

59. Monzie St.-Martin, La (Périgord, 7 Km. west of Bergerac).

Le Blant mentions that 'on a trouvé dans cette localité deux fragments d'un sarcophage de marbre sur lesquels se détachent le monogramme [i.e. a chrism] inscrit dans une couronne et des colombes becquetant des raisins'.

Le Blant, no. 103. *Bull. Mon.*, i, p. 135.

The appearance of birds (cf. in particular no. 31, Bordeaux 7, and no. 57, Moissac) and the geographical position of La Monzie suggest that this sarcophagus belongs to the Bordeaux group.

60. Narbonne (Aude) 1. In the Musée Lapidaire. Pl. xxxi, 9.

Front of six panels, two in centre upright containing acanthus-'trees', remainder horizontal containing fat ivy-scrolls. At the corners fluted columns. Ends, similar ivy-scrolls. No lid.

Le Blant, no. 180 and pl. xlvi, 1.

61. Narbonne 2. In the Museé Lapidaire.

Identical with no. 60, Narbonne 1, *q.v.* Condition less good. No lid.

62. Narbonne 3. In the Musée Lapidaire. Pl. xxxii, 1.

Front of ten panels, divided 4, 2, 4, by fluted columns; centre panels, acanthus-scroll and vine-scroll springing from chalices; to r. and l., above, vine-scrolls, below, ivy-scrolls. Very worn. L. end of four panels: above, ivy-scrolls, below, acanthi (as on front of no. 72, Narbonne, 13, pl. xxxv, 3). R. end (mostly gone), an acanthus (a variant of fig. 3, 6). No lid. The analogies with no. 72, Narbonne 13, suggest a date late in the series.

63. Narbonne 4. In the Musée Lapidaire.

Front of ten panels similar to that of no. 62, Narbonne 3, *q.v.* At each end four panels: above, acanthi, below, ivy-scrolls. No lid. Very worn.

64. Narbonne 5. In the Musée Lapidaire. Pl. xxxii, 2.

Front of eight panels containing vine-scrolls, with fluted columns at each end. Very worn. At each end four panels of ivy-scroll and two columns. No lid.

65. Narbonne 6. In the Musée Lapidaire. Pl. xxxi, 9.

Lid only. Front of three panels; centre, a marigold, surrounded by ivy-scroll; to r. and l., complex ivy-scrolls. At the ends, acanthi (a conflation of fig. 3, 2, and fig. 3, 6). Back imbricated. This sarcophagus-lid is now placed upon no. 60, Narbonne 1, to which it may well belong. The local catalogue, however, lists them separately without comment.

Le Blant, nos. 180–6 and pl. xlvi, 1.

66. Narbonne 7. In the Musée Lapidaire. Lid only, broken and much worn. At present placed upon no. 69, Narbonne 10. Pl. xxxvii, 8.

Front of six panels, centre vine-scrolls, to r. and l. (*a*) acanthus-'trees', (*b*) triangular ivy-scroll panels. At each end acanthi (as fig. 3, 6). Back imbricated.

67. Narbonne 8. In the Musée Lapidaire. Fragmentary.

Part of two panels from the left-hand end of an arcaded sarcophagus of alternately triangular- and round-headed panels separated by spiral columns (cf. no. 81, Rodez 1, to which it closely approximates). Within the panels single figures of apostles, of poor quality. L. end, acanthus-'trees', probably two.

68. Narbonne 9. In the Musée Lapidaire. Fragmentary.

Portion of a large and complex ivy-scroll panel.

This fragment was discovered during excavations upon the newly discovered site of St.-Félix-de-Narbonne, which was dedicated in A.D. 455 and formerly contained the tabular altar now at St.-Étienne-de-Minerve (see p. 81). The results have been exhaustively published in the *Bulletin du Comité archéologique de Narbonne* for 1928–9 by M. Ph. Héléna, to whom the writer is indebted for much courteous assistance.

68 A. Narbonne 9 A. In the Musée Lapidaire. Fragmentary.

Part of the end of a sarcophagus depicting Abraham's sacrifice; a hand in the top l. corner points to the ram below.

69. Narbonne 10. In the Musée Lapidaire. Pl. xxxvii, 8.

Front, a chrism within a wreath and W-strigils. At each end a marigold within a circular moulding and W-strigils. Plain rounded columns at the corners. No lid.

70. Narbonne 11. In the Musée Lapidaire. Pl. xxx, 2.

Front, a central, slightly recessed rosette of 25 petals (or shallow, fluted dish) and a strigil pattern of undecided character. At each corner unusual fluted columns. R. end, similar strigils but no central motif. L. end gone. No lid.

This sarcophagus bears several features not paralleled elsewhere in the series and is perhaps late.

71. Narbonne 12. In the Musée Lapidaire. Fragmentary.

Front of seven panels, three vertical containing single figures alternate with two pairs of small pastoral scenes, each pair being surrounded by a tiny chalice-and-ivy-scroll border and flanked by two fluted columns; in the central panel, much damaged, Christ below parted curtains healing the blind man. To r. and l. single figures of apostles. The pastoral panels contain all the stock types, the seated man (as on no. 35, Cahors, and no. 48, Loudun), both Endymion types (see p. 97), butting goats, dogs, etc. The ends are destroyed. No lid.

Le Blant, no. 177 and pl. XLIV, 2. Three right-hand panels only.

This sarcophagus belongs to the Toulouse-Rodez group.

72. NARBONNE 13. In the Musée Lapidaire. Pl. XXXV, 1–5.

Front not strictly symmetrical; a plain square central plaque; to the l., two panels, (*a*) Adam and Eve and the Tree of Life, (*b*) an interlacing strap pattern; to the r., four small panels, above of debased acanthus, below of ivy-scroll. The bottom of this face is bevelled. L. end, a single acanthus similar in type to those on the front. R. end, two acanthi of more normal form (similar to the normal acanthus-'tree').

F. Henry, *La Sculpture irlandaise*, pl. 113.

For the importance of this late sarcophagus in the establishment of the chronology of the Visigothic series see p. 103.

73. NARBONNE 14. In the Musée Lapidaire.

Very simple; front of S-strigils with a square central plaque; sides plain; recessed moulding at base. No lid. Very similar to no. 20 A, Béziers 1 A.

The simple character and bevelled lower edge (cf. no. 72, Narbonne 13) suggest a late date.

74. NARBONNE 15. In the church of St. Paul-Serge; now hidden by a cupboard against the west wall.

Front, an arcade of seven round-headed arches on twisted columns containing figures of Christ and six of the apostles; in the spandrels simple foliate scrolls. Sides built in or destroyed.

Le Blant, no. 188 and pl. XLIII, 2. Cast in the museum at St.-Germain.

The form of the arcading and the depth of the relief are unusual, and indicate perhaps that the sarcophagus may belong to the first period of production: they illustrate the surprisingly brief phase of transition in which were evolved the more stereotyped Visigothic forms.

75. NARBONNE 16. In the church of St. Paul-Serge; built in above the door at the west end of the north aisle. Until recently invisible.

Front only visible. Five fluted columns divide four panels, of which the central two contain vine-scrolls, the outer two acanthus-scrolls of a somewhat debased type.

Le Blant, no. 190.

76. PARIS. Formerly beneath the high altar in St.-Germain-des-Prés; subsequently removed to St.-Denys, and now in the Louvre placed upon no. 93, Soissons. Traditionally re-employed as the lid of the sarcophagus of the Abbé Morard. Original body lost. Pl. XXXVII, 2.

Front; square central panel of vine-scroll and chalice; to r. and l., imbrications. At each end a complex acanthus-plant (a conflation of fig. 3, 4 and 5, and the triangular leaf).

Le Blant, no. 10, pl. IV, 1; Michon, pl. XV.

77. Poitiers (Vienne). Formerly in the church of St. Hilaire, where it was known, from its odour, as 'Pierre qui put'. It was in part destroyed by eighteenth-century souvenir-hunters, in part during the Revolution. There remain a few tiny fragments in the Musée de la Ville, but for the most part it is known solely from the drawings of early antiquaries.

The front consisted of scenes of cherubs gathering the vintage (cf. nos. 35 and 48, Cahors and Loudun). At one end, Daniel, nude, beneath parted curtains and flanked by two lions. At the other end two pastoral scenes, one portraying the Endymion shepherd (see p. 97) leaning on his staff. Above each an ivy-scroll, and spiral columns at the corners.

Le Blant, no. 97 and pl. xxiv, 1–2.

This sarcophagus belongs to the Toulouse-Rodez group.

78. Ponsan-Soubiran (Gers, 20 Km. south of Mirande).

Le Blant records that 'un débris de marbre, encastré dans la face sud de l'église, représente un double cep de vigne s'échappant d'un vase et s'étendant des deux côtés, entre des pilastres cannelés'. It belonged without doubt, as he remarks, to a sarcophagus of the present series.

Le Blant, no. 119.

79. Puissalicon (Hérault, 18 Km. north of Béziers).

Le Blant records that Taylor et Nodier, *Voyages pittoresques dans l'ancienne France, Languedoc*, t. 2, ii, mention 'un sarcophage à ornements de style mérovingien, sur lequel est sculpté le monogramme [i.e. a chrism] entre des rinceaux', formerly in the cemetery at Puissalicon. The description would apply to no other known class of sarcophagi.

Le Blant, no. 172.

80. Pujols (Gironde).

Front, a central chrism within a wreath tied with ribbons; the remainder consists of thin, slightly curving S-strigils, with slender columns at the corners; the plinth below is perhaps not part of the original sarcophagus. At one end, and probably both, a marigold and S-strigils. No lid.

Le Blant, no. 106; Caumont, *Abécédaire*, fig. p. 53; Coutil (p. 16) reproduces Caumont's figure, but describes it wrongly as from 'a church in the Dordogne', i.e. no. 127.

This sarcophagus probably belongs to the Bordeaux group.

80a. Renaut (Lot-et-Garonne, near Agen). In use in 1874 as a water-tank near the house of Lapalme.

Front of three panels, fluted columns; centre vine-scroll, to r. and l., V-strigils. At each end V-strigils. No lid.

Tholin, 284.

81. Rodez (Aveyron) i. Formerly in the church of the Madeleine, now in the cathedral.

Front of nine panels, alternately round- and triangular-headed and separated by spiral columns; the 'spandrels' are occupied by the capitals flanked by S's and rosettes; within the panels Christ and eight of the apostles. L. end, Christ seated teaching two apostles. R. end, an edifice with the chi-rho upon the pediment and flanked by two apostle-figures, perhaps representing the Holy Sepulchre (cf. no. 116, Toulouse 22). Only here and on the identical scene on no. 116, Toulouse 22, is the chrism of the upright form. The lid, now destroyed, was of normal shape.

Le Blant, no. 89 and pl. XXII, 1–3; Garrucci, CCCXXXIX, 5–7.

This sarcophagus belongs to the Toulouse-Rodez group.

82. Rodez 2. Knowledge of this and of the following four sarcophagi is derived ultimately from drawings made by Beaumeni in 1764. The ideas of this artist upon the subject of historical accuracy were often eccentric, but there seems no valid reason to doubt the former existence of nos. 82–5 in the cemetery of St. Amant, Rodez. See Le Blant, *s.v.* no. 90.

Centre a chrism, flanked by two figures, each 'vêtue du pallium', which, upon the analogy of Le Blant's normal usage, should indicate apostle-figures. Ends not known. No lid.

83. Rodez 3. See no. 82, Rodez 2.

A central chrism between two rows of V-strigils; at the corners twisted columns. Ends not known. Lid imbricated.

84. Rodez 4.
85. Rodez 5. } See no. 82, Rodez 2.

Two sarcophagi, almost plain except for a chrism. Lids plain, of normal shape.

86. Rodez 6. See no. 82, Rodez 2. Stated still to exist in the garden of the bishop's palace (but see below). Attributed to St.-Mauras.

An arcaded front with central chrism and 'plantes ornamentales'. Beaumeni adds two figures similar to those on no. 82, Rodez 2; but others (e.g. *Rev. de l'art chrét.*, 1875, avril, p. 231, and *Bull. mon.*, xxxiii, p. 375) omit these, probably rightly. No lid.

This is probably the same sarcophagus as that now placed in the north aisle of the cathedral. The front alone is decorated, and the ornament is of an eccentric, local character unlike that of any others of the Visigothic series. Pl. XXXVI, 5.

87. St.-Bertrand-de-Comminges (Haute-Garonne) 1. Found in the primitive church (abandoned in A.D. 586); now in the Galerie du Trophée.

Of Visigothic shape but rounded internally and plain save for an incised chrism of unusual form on one gable-end, and along one side of the lid the inscription: DA $\overline{\text{XPE}}$ FAMVLAE TVAE AEMILIANAE REQVIEM ET VITAM AETERNAM.

C. R. Acad. Inscr. et Belles-Lettres, 1914, p. 59 (the excavations). *Congrès Arch. de France*, 1929, Toulouse (a recent summary).

This important and unusual sarcophagus can hardly be pre-Visigothic. The shape is not in itself conclusive (see p. 91), but the lettering precludes an early date. Normal fourth-century types are moreover quite well represented in Aquitaine, of which St.-Bertrand was an important cultural centre. Further, typical Visigothic sarcophagi must have been well known at St.-Bertrand, whence no doubt came the examples now at Valcabrère (nos. 124–6), which is distant only 2 Km.; see also the fragments no. 88, St.-Bertrand 2. It is of course highly probable that plain sarcophagi of this form were being employed by the humbler Christians contemporaneously with the production of decorated, and therefore more recognizable, Visigothic sarcophagi. The presence, however, in the destroyed church of plain examples upon which the lid is higher at one end than at the other (a feature not found upon Visigothic sarcophagi but later general, e.g. upon some at Bordeaux to which a post-Visigothic date can undoubtedly be assigned, and persisting into the middle ages), and the derivative but wholly uncharacteristic nature of the sarcophagus of Aemiliana, both would seem to indicate that prior to 586 a considerable period had elapsed during which the ordinary Visigothic sarcophagi were not being made in Aquitania. The sarcophagus of Aemiliana belongs presumably to the latest years of the existence of St.-Bertrand, i.e. *c.* 550-86.

88. St.-Bertrand-de-Comminges 2. In the Musée de Comminges at St.-Bertrand.
Several minute fragments of sarcophagi of normal type—vine-scroll, cable-patterns, and imbrications.

89. St.-Geny (below Lectoure, Gers) 1. From the site of the original cathedral, where were also found many plain marble sarcophagi. Now in the museum at Lectoure.
Fragment, a chrism within a wreath.
Le Blant, *s.v.* no. 114.

90. St.-Geny 2. From the same site as no. 89, St.-Geny 1. In the museum.
Fragment of a lid in St.-Béat marble; a chrism within a square plaque, a genius with reversed torch (cf. no. 9, Agen 9) and a tree.
Le Blant, *s.v.* no. 114, and pl. xxv, 4.

91. St.-Guilhem-le-Désert (Hérault) 1. In the church.
Front, Christ and the twelve apostles in a complex setting of arches and panels (see plate). R. end, the three Hebrews in the furnace (cf. no. 121, Toulouse 27; and on the Arlesian sarcophagi, e.g. at Manosque, Le Blant, no. 204, pl. l). L. end, Adam and Eve. Lid L-shaped; front of five panels; centre Daniel in the lions' den beneath parted curtains; to r. and l, (*a*) acanthus-'trees', (*b*) debased vine-scroll. Ends, ivy-scrolls.
Le Blant, no. 143 and pls. xxxiv; xxxv, 1.

92. St.-Guilhem-le-Désert 2. Now in the Metropolitan Museum at New York.
Part of the front of a sarcophagus, a central panel with a chrism in a circular moulding surrounded by ivy-scrolls; to r. and l., smaller panels of ivy-scroll.
M. de Dainville, 'L'enfance des églises du diocèse de Montpellier', in *Monspeliensia*, ii, 1, fig. 42.

93. Soissons (Aisne). From the church of Notre-Dame. Now in the Louvre. Traditionally the tomb of St. Drausin. Pl. xxxi, 1–2.
Front of three panels; centre, a chrism in a circular moulding surrounded by rinceaux; to r. and l. two vine-scrolls springing from debased acanthi; the leaves

are treated in the same way as no. 27, Bordeaux 3, with incised detail; in the field curious rod-like objects. L. end, a marigold flanked by corn-shoots (?). R. end, a chrism surrounded by similar vine-scrolls springing from an acanthus. At the corners spiral columns, almost free-standing, with much-damaged flanking rods.

No lid (that at present placed on it is no. 76, Paris).

Le Blant, no. 16 and pl. IV, 1; Michon, pl. XV; Coutil, figure opposite p. 20.

This sarcophagus belongs to the Bordeaux school; it is very possibly a medieval stray.

94. TABANAC (Gironde, 12 Km. above Bordeaux). In the Musée Lapidaire at Bordeaux. Pl. XXXII, 6.

Front of three panels; central panel larger, ivy-scrolls surrounding a plain plaque with dove-tail ends; to r. and l., four small vine-scroll panels; at the corners fluted columns. At each end two acanthus-'trees'. No lid.

Caumont, *Abécédaire*, fig. p. 51.

95. TOULOUSE (Haute-Garonne) 1. From the cemetery of St. Sernin. In the Musée des Augustins, Toulouse. Pls. XXXIII, 2 and 7; XXXIV, 4.

Front of seven panels containing, in groups of one and two alternately, Christ and ten of the apostles; at the corners fluted columns. R. end, the huntsman with flying cloak spearing a lion (see p. 97) with an archer (?) in the top right-hand corner. L. end, the Endymion shepherd (see p. 97) leaning on his staff with sheep, goats, and Pan-pipes (cf. no. 58, Montpezat). Lid imbricated save for a square central panel, a chrism within a circular moulding flanked by parted curtains and acanthi (as fig. 3, 4). On the back an inscription: SEPVLTVRE D'ANTOINE VIGNIAVX NEGOTIANT DE CETTE VILLE ET POVR LES SEINS RIPA, indicating its re-use in the seventeenth century. Du Mège (*Description du musée de Toulouse*, no. 432) states that the lid does not belong.

Le Blant, no. 153 and pl. XXXIX, 1–3; Garrucci, CCCLXXIII, 1–3 (very inadequate); Catal. 507.

96. TOULOUSE 2. From the church of La Daurade. In the Musée des Augustins. Known formerly as 'Tombeau de la Reine Pédauque'. Pls. XXXIV, 6; XXXVIII, 2.

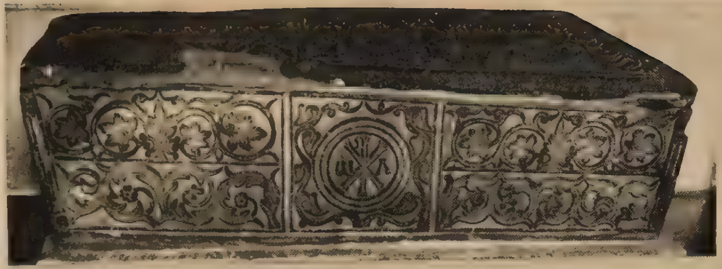
Lid only, of L-shaped section with a front of seven panels divided by tiny ivy-rinceaux; centre, Christ beneath parted curtains raising a dead man (as on no. 55, Le Mas-St. Antonin). To r. and l., six pairs of apostles, conflated in two instances with miracle-scenes (*a*) the Cana miracle, (*b*) the multiplication of the loaves. Ends, a crude leaf-design (derived perhaps from primitive Aquitanian work e.g. Espérandieu, *Recueil*, ii, 865 and others, Gallo-Roman altars from the Upper Garonne; Musée des Augustins, Catal. 253, 298, and 300).

Le Blant, no. 155 and pl. XL; Garrucci, CCCLXXXV, 6.

This sarcophagus belongs to the Toulouse-Rodez group.

97. TOULOUSE 3. From St.-Michel-du-Touch, a suburb of Toulouse. In the Musée des Augustins. Pls. XXXIII, 6; XXXIV, 3.

Front of seven panels, alternately round- and triangular-headed, separated by plain columns; within each panel the figure of an apostle; in the spandrels two opposed S's. L. end, Abraham's sacrifice (broken). R. end (almost entirely destroyed), vine-scroll. No lid.



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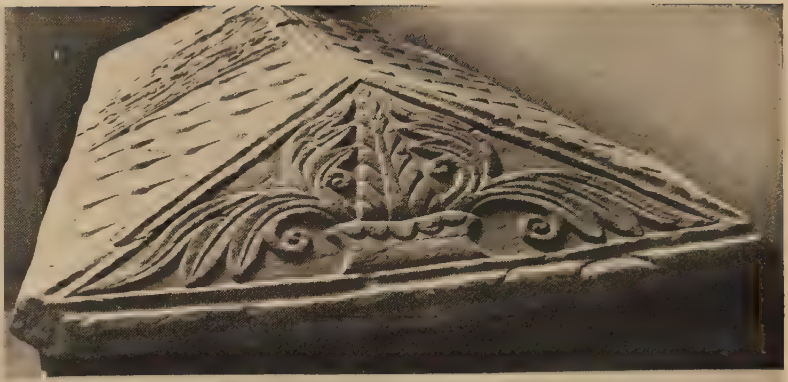

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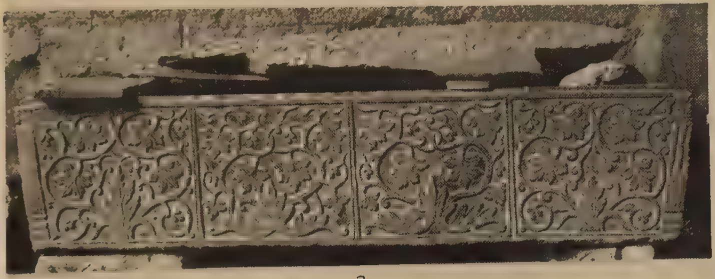

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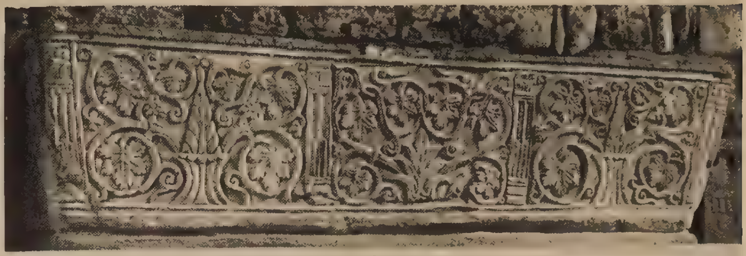

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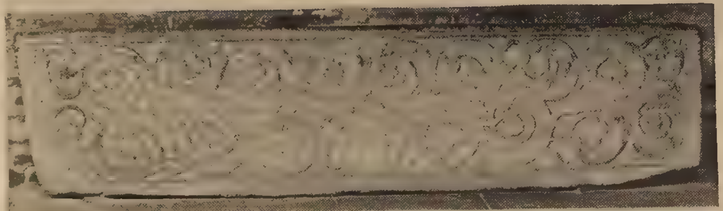

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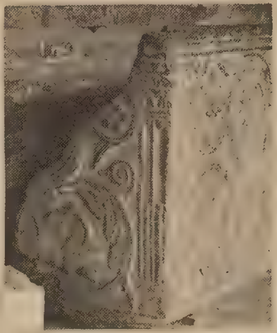

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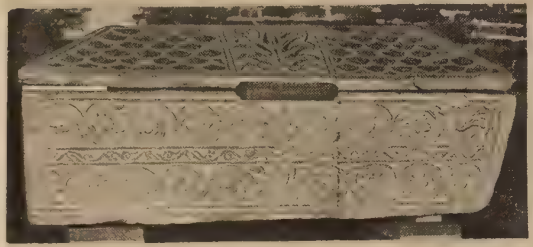

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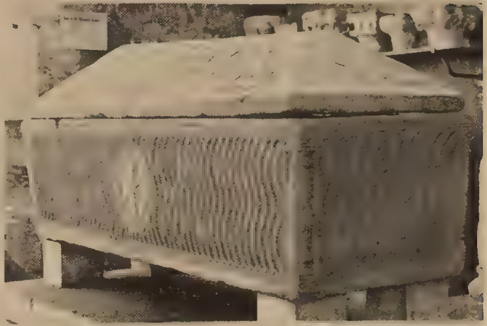

8

1. No. 28, Bordeaux 4. 2. No. 76, Paris. 3. No. 21, Béziers 2. 4. No. 46, Floure. 5. No. 103. Toulouse 9. 6. No. 103, Toulouse 9. 7. No. 104, Toulouse 10.
8. Nos. 66 and 69, Narbonne 7 and 10

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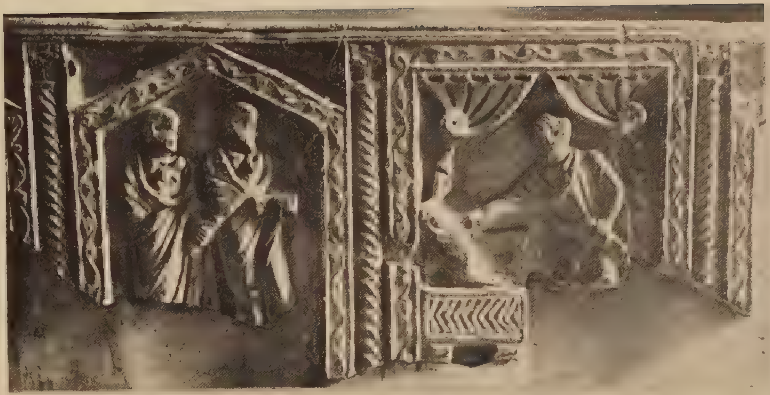

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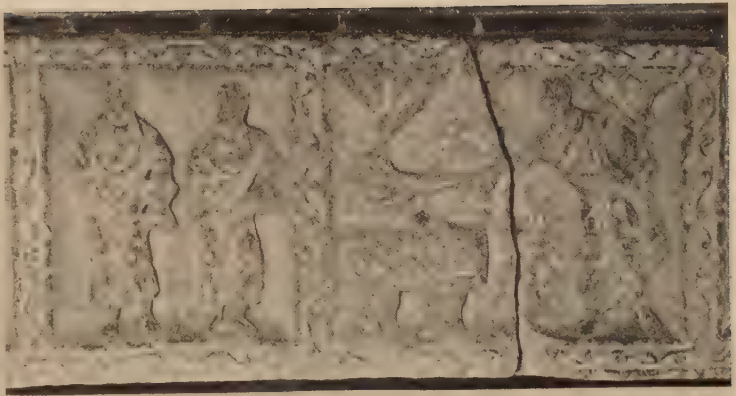

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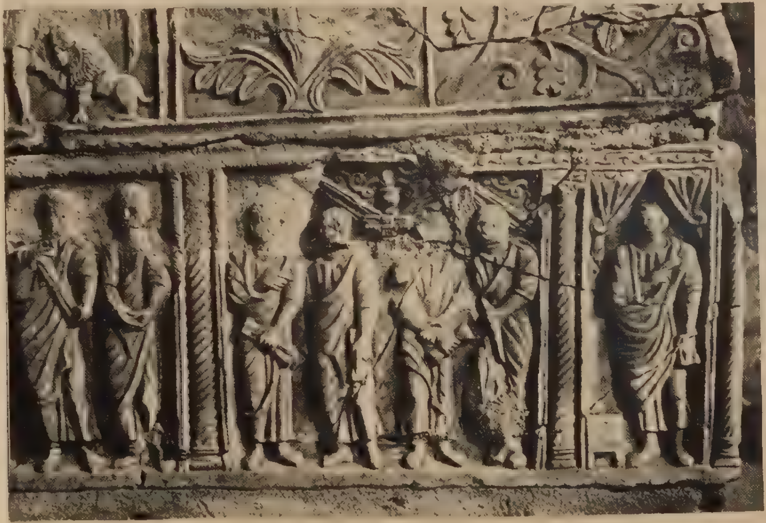

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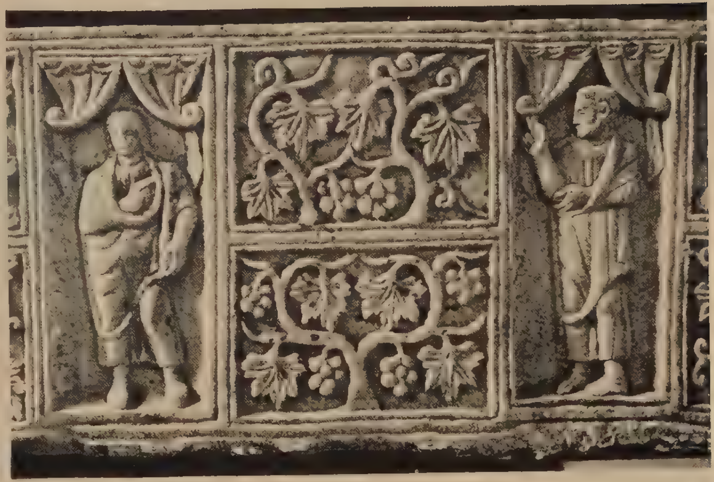

4

1. No. 55, Le Mas-St.-Antonin. 2. No. 96, Toulouse 2. 3. No. 91, St.-Guilhem-le-Désert. 4. No. 37, Castelnau-de-Guers

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Le Blant, no. 156 and pl. XLII, 1–2; Garrucci, CCCXL, 3; Catal. 809.

This sarcophagus perhaps belongs to the Toulouse-Rodez group.

98. TOULOUSE 4. From St.-Michel-du-Touch. In the Musée des Augustins.

Arcaded front of seven triangular-headed panels separated by spiral columns; in the spandrels chalices and simple rinceaux; above and below small rinceau-borders; in the panels Christ and six apostles. Ends (broken), two similar panels each.

Le Blant, no. 157 and pl. XLI, 1–3.

99. TOULOUSE 5. From the cemetery of St. Sernin. In the Musée des Augustins. Pls. XXXII, 3; XXXIII, 5.

Front of three panels separated by cable-mouldings. Centre, an unusual figured scene; two horsemen dismounted, in the middle a nude (?) figure spearing a boar (the huntsman type, see p. 97); in the background trees. The horsemen presumably represent Castor and Pollux; cf. a pagan sarcophagus in the museum at Arles (Le Blant, *Études sur les sarcophages d'Arles*, pls. XXIII, XXIV, 1–2; M. Lawrence, 'Columnar Sarcophagi in the Latin West', *Art Bulletin*, xiv, 1932, fig. 59; Espérandieu, i, no. 169). In each of the panels to r. and l. a vine-scroll, with channelled stalks, springing from an acanthus (as fig. 3, 1). At each end an acanthus-scroll. At the corners spiral columns.

Lid, front of three panels divided by cable-pattern. Centre, a wreath adorned with a rosette, with knotted ends (cf. no. 32, Bordeaux 8, and no. 57, Moissac), upheld by two cupids (cf. no. 9, Agen 9) flying amid a vine-scroll. To r. and l. vine-scroll springing from an acanthus. Ends as side panels. Back imbricated.

Le Blant, no. 151 and pl. XXXVIII, 1 (the sketch of the lid in the text is very inaccurate); Catal. 505 (a).

This sarcophagus belongs to the Bordeaux group.

100. TOULOUSE 6. From the cemetery of St. Sernin. In the Musée des Augustins. Fragmentary. Pl. XXXIII, 4.

Parts of two panels of a front of three panels, separated by fluted columns. Centre, two rustic scenes: (*a*) above, a boy standing upon a man's back to pluck fruit from a tree and a shepherd leaning on his staff (the Endymion shepherd, see p. 97); (*b*) below, destroyed. R., acanthus and vine-scroll.

Le Blant, no. 152 and pl. XXXVIII, 3; Catal. 764 (c).

101. TOULOUSE 7. From the cemetery of St. Sernin. In the Musée des Augustins. Pl. XXXI, 4.

Front of three panels, separated by fluted columns; in each panel a chalice whence springs a vine-scroll and triangular leaf. At each end vine-scroll springing from acanthus. The lid now placed upon it (no. 102, Toulouse 8) was found upon it but can hardly have belonged originally.

Catal. 14.

102. TOULOUSE 8. From the cemetery of St. Sernin, found upon no. 101, Toulouse 7, to which it can hardly have belonged originally. In the Musée des Augustins. Pl. XXXI, 4.

Lid only. Front, a central dove-tailed plaque (cf. no. 94, Tabanac) with two rosettes below; to r. and l., vine-scrolls. At each end acanthi (as fig. 3, 5).

Catal. 14.

103. Toulouse 9. In the Musée des Augustins. Pl. xxxvii, 5-6.

Front, a double row of acanthus-scroll as on no. 50, Maguelonne. Ends as front (mostly destroyed). At the corners fluted columns. No lid.

104. Toulouse 10. From the Place St.-Étienne, Toulouse. In the Musée des Augustins.

Front, two horizontal panels of acanthus-scroll springing, (*a*) above, from a chalice with triangular leaf, (*b*) below, from an acanthus (as fig. 3, 2); the panels are divided by a tiny ivy-scroll. At the corners fluted columns. At each end two panels as in front, the scrolls springing from the lower forward corners. Lid imbricated, with an acanthus in a square central panel.

Catal. 13.

105. Toulouse 11. From the cemetery of St. Sernin. In the Musée des Augustins.

Sole decoration, a narrow horizontal plaque with central chrism and, to r. and l., a degraded acanthus-scroll. Lid plain.

Catal. 508, where it is described erroneously as Romanesque. It is, however, probably of late date.

106. Toulouse 12. In the Musée des Augustins. Pl. xxxv, 6.

Front of seven panels, four of acanthus-'trees', three of vine-scroll and acanthus (as fig. 3, 2). Fluted columns at the corners. At each end two acanthus-'trees'. No lid.

Catal. 769.

107. Toulouse 13. In the Musée des Augustins. Fragmentary. Pl. xxxiv, 6.

Part of a front of three panels separated by fluted columns; centre, a chrism within a circular dot-and-cable moulding surrounded by vine-scroll; to r. and l., two rows of V-strigils bordered by a simple cable-pattern. Ends destroyed.

Catal. 764 (d); description inverted.

108. Toulouse 14. In the Musée des Augustins. Fragmentary. Pl. xxxiv, 6.

Part of a front with a central panel of a chrism within a circular dot-and-cable moulding surrounded by ivy-scrolls; to r. (gone) and l., four small panels of V-strigils; at the corners fluted columns. Ends destroyed.

Catal. 764 (e).

109. Toulouse 15. In the Musée des Augustins. Fragmentary. Pl. xxxiv, 6.

Part of a front with a central panel of a chrism within a formalized wreath surrounded by a strigil-pattern; to r. and l. (gone), four small panels of V-strigils with cable borders. Cf. no. 117, Toulouse 23.

Catal. 764 (f).

110. Toulouse 16. In the Musée des Augustins. Pl. xxx, 1.

Front a chrism within a circular moulding and large V-strigils. At each end similar strigils with central motifs, (*a*) r., a chalice, (*b*) l., a marigold. Lid imbricated.

Catal. 763.

111. TOULOUSE 17. In the Musée des Augustins.

Front only preserved. In the centre a chrism within a wreath; to r. and l., imbrications divided horizontally by a narrow band of cable-and-dot and surrounded by a plain cable-moulding. At the corners round columns.

Garrucci, CCCXC, 1; Catal. 505 (b).

112. TOULOUSE 18. In the Musée des Augustins. Pl. XXX, 4.

Plain save for a central chrism within a circular moulding and rounded corner-columns. Lid plain but bearing an inscription recording its re-use in A.D. 1311.

Catal. 765.

113. TOULOUSE 19. In the Musée des Augustins.

Front of W-strigils and a central chrism within a circular moulding. At each end W-strigils and a marigold. At the corners fluted columns.

Catal. 766.

114. TOULOUSE 20. In the Musée des Augustins.

Small fragment of strigil-pattern with cable border.

115. TOULOUSE 21. In the Musée des Augustins. Pl. XXXIV, 5.

Plain save for rounded columns at the corners and a central medallion within which is a crude figure represented with pitch-fork, knife, and pail (?). The schematized figure with conical head and rectangular body is akin to those upon the Gallo-Roman stelae of the Upper Garonne (see Espérandieu, *Recueil*, vol. ii; Catal. 242, 279–80).

Catal. 770.

116. TOULOUSE 22. In the chapel of the Counts of Toulouse outside the south transept of St. Sernin-de-Toulouse.

Front very worn, an arcade of ten triangular-headed arches upon twisted columns, framing Christ and nine apostles; in the spandrels simple rinceaux and chalices. R. end, between a fluted and a twisted column two figures, each beneath parted curtains, upholding a portrait-medallion. L. end, between similar columns two apostle-figures standing on each side of a small building, perhaps the Holy Sepulchre (exactly reproduced on no. 81, Rodez 1). Lid of L-shaped section; front of three panels separated by fluted columns depicting Christ and the twelve apostles, conflated (as on no. 96, Toulouse 2) with miracle-scenes, e.g. the Cana miracle: to r. and l. two genii with reversed torches. At each end a leaf (cf. no. 96, Toulouse 2), a dolphin (cf. no. 35, Cahors), and a rosette.

Le Blant, no. 149 and pl. XXXVII, 1–3; Garrucci, CCCXXXIX, 1–4

This sarcophagus belongs to the Toulouse-Rodez group. The ends, now invisible, are known only from nineteenth-century drawings; but although the scene upon the left-hand end of the body does not seem to have any close parallel, its accuracy is supported by the close similarity between that at the right-hand end and no. 81, Rodez 1.

117. TOULOUSE 23. In the same chapel as no. 116, Toulouse 22.

Body: a square central panel containing a chrism within a formalized wreath (as no. 109, Toulouse 15) surrounded by a strigil pattern; to r. and to l., four small panels of V-strigils. L. end, small V-strigils and a central marigold. R. end, invisible. At the corners, rounded columns. Lid imbricated; there is a circle in the middle of the l. end but no detail is visible.

Coutil, an inaccurate illustration opposite p. 16.

118. Toulouse 24. In the same chapel as no. 116, Toulouse 22.

Body: front very damaged, but traces of V-strigils as on no. 117, Toulouse 23. R. end, four small panels of V-strigils. L. end, invisible. At the corners, fluted columns. Detail, if any, of the lid invisible.

Coutil, opposite p. 16, publishes a wholly inaccurate drawing. To judge from the dimensions and from all analogies there must have been a central panel, probably containing a chrism.

119. Toulouse 25. In the same chapel as no. 116, Toulouse 22.

Very small and quite plain save for rounded columns at the corners.

120. Toulouse 26. Built into the outer wall of the south transept of St. Sernin, near nos. 109–12.

Two fragments of the front of a sarcophagus upon which were pastoral panels separated by fluted columns with spiral columns at the corners; the figures include sheep and trees, the Endymion shepherd leaning on his staff (see p. 97), and the huntsman, with flying cloak, spearing a bear (see p. 97).

Le Blant, no. 150 and pl. xxxviii, 2.

120a. Toulouse 26a. Built into the outer wall of the south transept of St. Sernin, near no. 120.

Probably the end of a sarcophagus showing, against a background of trees and rocks, the huntsman (cloakless) and dogs. Top 6 in. alone visible. To either side are fluted columns, in this differing from no. 120, Toulouse 26, which has spiral columns at the corners.

121. Toulouse 27. Fragment formerly in the Tour des Franciscains. Now in the Musée des Augustins.

One end of a sarcophagus depicting the three Hebrews in the fiery furnace (cf. no. 84, St.-Guilhem-le-Désert).

Le Blant, no. 158, with drawing by R. P. Martin (the sarcophagus has reappeared since Le Blant wrote).

Garrucci, pl. cccxcvii, 1.

122. Toulouse 28. Two fragments from the rue des Gestes in the Musée des Toulousains de Toulouse.

Columns with three flutings, V-strigils, and cable-mouldings.

The catalogue of the Musée des Augustins lists a further fragment, no. 764 (b), with this series. Both the incised technique, however, and the form of the chrism with an S entwined round the lower upright stroke indicate that it is of Romanesque date.

123. La Valbonne, L'Abbaye de (near St.-Michel-d'Euzet, Gard). Now in the Musée Lapidaire, Nîmes. Pl. xxxvi, 1–2.

Front of seven panels separated by fluted columns; centre, Christ, below parted curtains: to r. and l. (*a*) an acanthus-tree, (*b*) vine-scroll and vertical leaf springing from a chalice, (*c*) an apostle, below parted curtains. L. end, a marigold vine-scroll and fluted columns. R. end, similar. Lid: square central panel, a chrism within a circular moulding with curtains in the upper corners, and below acanthi which have degenerated into meaningless lines. R. end, marigold and very degenerate acanthi. L. end, similar acanthus.

Le Blant, no. 125 and pl. XXVIII, 1. A cast in the museum at St.-Germain-en-Laye.

This sarcophagus is of sixth-century date: the degenerate acanthus is akin to that on no. 56 at Mende and related to that on no. 72, Narbonne 13.

124. VALCABRÈRE (Haute-Garonne, just below St.-Bertrand-de-Comminges) 1. In the church of St. Just.

Fragment of a sarcophagus-front, in the centre a debased chrism within a wreath surrounded by curved W-strigils.

125. VALCABRÈRE 2. In the church.

Small fragment, an ivy-scroll springing from an acanthus (as fig. 3, 2).

126. VALCABRÈRE 3. In the church.

Part of the r. end of a lid, the front incongruously divided by a column with three flutings; to r. S-strigils, to l. two panels of V-strigils divided horizontally by a simple rinceau and surrounded by a cable-moulding. R. end almost completely gone.

This sarcophagus belongs to the Bordeaux group.

There is also a fragment of imbricated lid in the same church. The three sarcophagi at Valcabrère came no doubt from St.-Bertrand-de-Comminges when it lay deserted after A.D. 586.

127. VIENNE (Isère). From the cemetery of St. Maurice. A small fragment only preserved in the museum.

Front of five panels: centre, a chrism within a circular moulding flanked by vine-scrolls springing from a chalice; in each outer panel, an apostle, in an arch formed by two twisted columns and an inverted ω (not paralleled on the Visigothic series; but it is found at Marseilles, Le Blant, no. 54 and pl. XVI, 2); intervening panels larger, with S-strigils. Above, apparently a bead-and-reel border. Lid plain.

Le Blant, no. 26. He reproduces the rather naïve sketch by Charvet from which it is chiefly known. Either it belongs to the Visigothic series or it was made in direct imitation.

128. 'UNE ÉGLISE DE LA DORDOGNE'.

Front, a central chrism within a wreath tied with trailing ribbons; the remainder of this face consists of fat S-strigils with fat, rounded columns at the corners. At either end a marigold and strigils. Lid imbricated, with a dot-and-cable moulding on the ridges and lower border.

Caumont, *Abécédaire*, fig., p. 52; Coutil (pl. VI), who wrongly describes it as from Pujols.

This sarcophagus probably belongs to the Bordeaux group.

129. Ampurias (Catalonia).

Part of a sarcophagus-front with rounded W-strigils and central chrism within a wreath. It is of regular Visigothic type.

Puig y Cadafalch and others, *L'Arquitectura románica a Catalunya*, i, fig. 328.

130. Aniane (Hérault, 20 Km. west of Montpellier).

Le Blant, no. 144, records 'à raison de sa ressemblance avec nos sarcophages un devant d'autel mérovingien de marbre blanc que j'ai vu à Aniane. Au milieu est le monogramme inscrit dans un cercle et accosté de l'A et de l'Ω sculptés à rebours. Des rinceaux entourent ce signe du Christ.' The description certainly suggests a re-used Visigothic sarcophagus-front. Le Blant, however, certainly implies that it was not, and it can only be included here with that reservation.

131. Cadarcet (Ariège). In the Louvre.

A crude local imitation in soft yellow stone. Front, three double panels of C-strigils, and in the centre a circular frame of tiny ivy-scroll enclosing a vine-scroll springing from a chalice. The ends are similar, with in the centre, l., a marigold, r., a column. The rim has an internal bevel as if for a flat lid. Though obviously directly derived from Visigothic models, both material and execution are quite foreign to the Visigothic series.

NOTE

Since this article went to press there has appeared J. Hubert's important work, *L'Art Pré-Roman* (Paris, 1938). He produces a great deal of interesting evidence (pp. 92–100) to show that Aquitanian marble was used all over France in the fifth, sixth, and seventh centuries, and that the trade ceased only with the political upheavals of the eighth century. The Visigothic sarcophagi he assigns to the seventh century, chiefly on the grounds of the attribution of certain examples to historical persons of that period and also of the stylistic disparity between these sarcophagi and those of the fourth century. The latter point has been fully discussed above. The former is surely vitiated by the well-attested habit of re-using earlier sarcophagi as well as by the natural tendency to associate such objects with well-known names. His distribution-map includes, besides the examples here listed, specimens from Espagnet, Lectoure, Perges (near Moissac), Perpignan, St.-Germer-le-Vieux (near Toulouse), and St.-Romain (near Vienne), but no references to these are given in the text.

V.—*Two Bronze Age Cairns in South Wales: Simondston and Pond Cairns, Coity Higher Parish, Bridgend*

By Sir Cyril Fox, *Vice-President*

Read 31st March 1938

Introduction

In the angle between the rivers Ogwr and Ewenny on the northern margin of the Vale of Glamorgan, east of the town of Bridgend, Brackla Hill (287 ft.) is the outstanding feature. Its pastoral slopes are linked to higher ground on the north by a saddle, on the east side of which there is a gentle fall to a tributary of the Ewenny, and on the west to a rivulet which flows into the Ogwr. Coity village lies at the point where the saddle merges into the upland.

A large portion of the area thus defined had been purchased by the War Department under the 1936 Defence Scheme, and the Army Council kindly permitted the National Museum of Wales to examine their land and make record of any antiquity visible on it, prior to development. Nothing was marked on the 6-in. Ordnance Survey map (Sheet XL N.E.), but the presence of the remains of a chamber tomb near Coity village (no. 106 on the Ordnance Survey megalith map of South Wales) justified careful inquiry.

His Majesty's Office of Works was carrying out a survey of the site on behalf of the War Department, and the existence of two mounds was reported to the writer by Mr. S. E. Scammell, Surveyor. The first was situated on the saddle already referred to, 190 ft. above O.D., 700 yards due south of Coity church. The second lay in the basin-like hollow to the west of it, near the rivulet, and 125 ft. above O.D. It was 1,000 yards west-south-west of the church. Both mounds were investigated by me on behalf of the Museum with my wife's assistance in 1937, and form the subject of this communication.

The sketch-map, fig. 1, illustrates the relation of the mounds to the topographical features described above, while fig. 2 shows their position in relation to the field divisions in the area.[1]

The interest taken in the investigation by Mr. F. J. E. Raby, C.B., Assistant Secretary to the Office of Works, and by Mr. B. H. St. J. O'Neil, Inspecting Officer for Wales of the Ancient Monuments Department of the Office, is gratefully acknowledged. The help freely given by their officials on the spot,

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[1] It should be added that one of the mounds is now destroyed, and the other may at any time be removed.

Mr. G. W. Hall, and his assistant Mr. B. E. Thompson, was of the greatest value. Mr. Hall organized the supply of labour and prepared a contoured plan of the first mound; Mr. Thompson prepared that of the second. The Ancient Monuments Department furthermore paid for the excavation of the first mound and for the filling-in of the second. The excavation of the second mound was rendered possible by generous donations from personal friends: Mr. G. E. Blundell, F.G.S., Mr. W. Scott Henderson, and Mr. P. Murray-Threipland. The Army Council kindly presented the finds from both mounds to the National Museum of Wales as the gift of the Secretary of State for War.

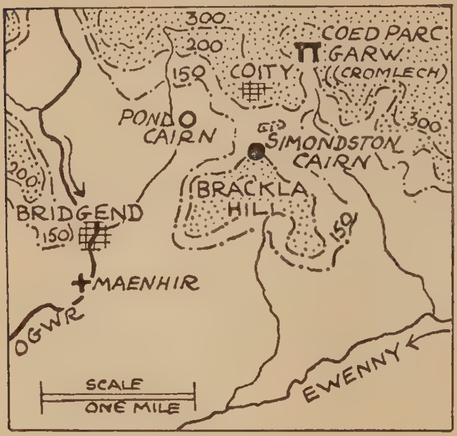


Fig. 1. Sketch-map of region showing relation of the cairns to the topography

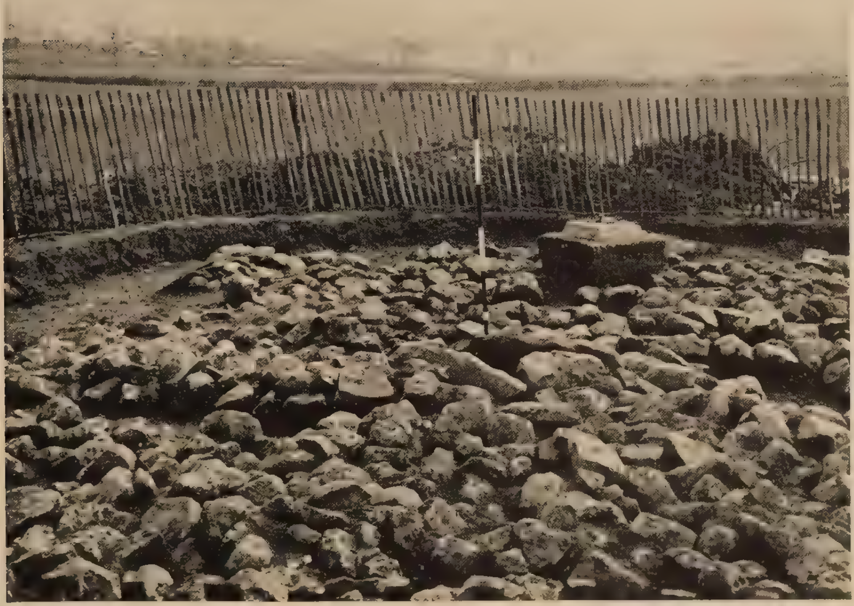
My wife carried out the primary examination of most of the deposits, both in the field and the museum. The important discovery of grains and seeds was due to her. I am indebted to Dr. John Percival for his valuable services in identifying these grains and seeds; to Mr. A. S. Kennard for his examination and reports on soil samples; to Mrs. Miles Burkitt for her drawings of flint tools; to four of my colleagues for valuable help—Dr. F. J. North, F.G.S., for his lithological surveys, and his discovery of coal as a Bronze Age fuel; also for reading through and making corrections in the text of the report; Mr. H. A. Hyde, M.A., F.L.S., for his detailed survey of the plant remains, and for work on the cereals also; Mr. L. F. Cowley, M.Sc., for his essential reports on the osseous remains; and to Mr. W. F. Grimes, M.A., F.S.A., for his drawings of the urns. I am also indebted to Mr. Grimes and to Mr. F. G. Gay of the Department of Archaeology of the Museum for removing and reconstructing the urns.

The efficiency of Mr. Morgan Davies, who had previous experience of archaeological field work, and who acted as foreman throughout both excavations, contributed greatly to the success of the work. I am indebted to Messrs. Hitt and Morgan of Bridgend for the supply of shed and tools, etc., at a nominal figure.

I. Simondston Cairn

The circular mound on the saddle below Brackla Hill was investigated first, since its site was marked down for immediate development. It was of scarcely perceptible elevation (18 in.); trial holes were indeed cut in it before a definite opinion as to its character could be formed. The structure was given the name Simondston Cairn from the nearest hamlet, a farm and ruined mill

1. Site of Simondston Cairn (white patch in middle distance) from Brackla Hill



2. Remains of Simondston Cairn (the original soil covering is shown at the trigonometrical station in the background). The ranging pole marks the cist

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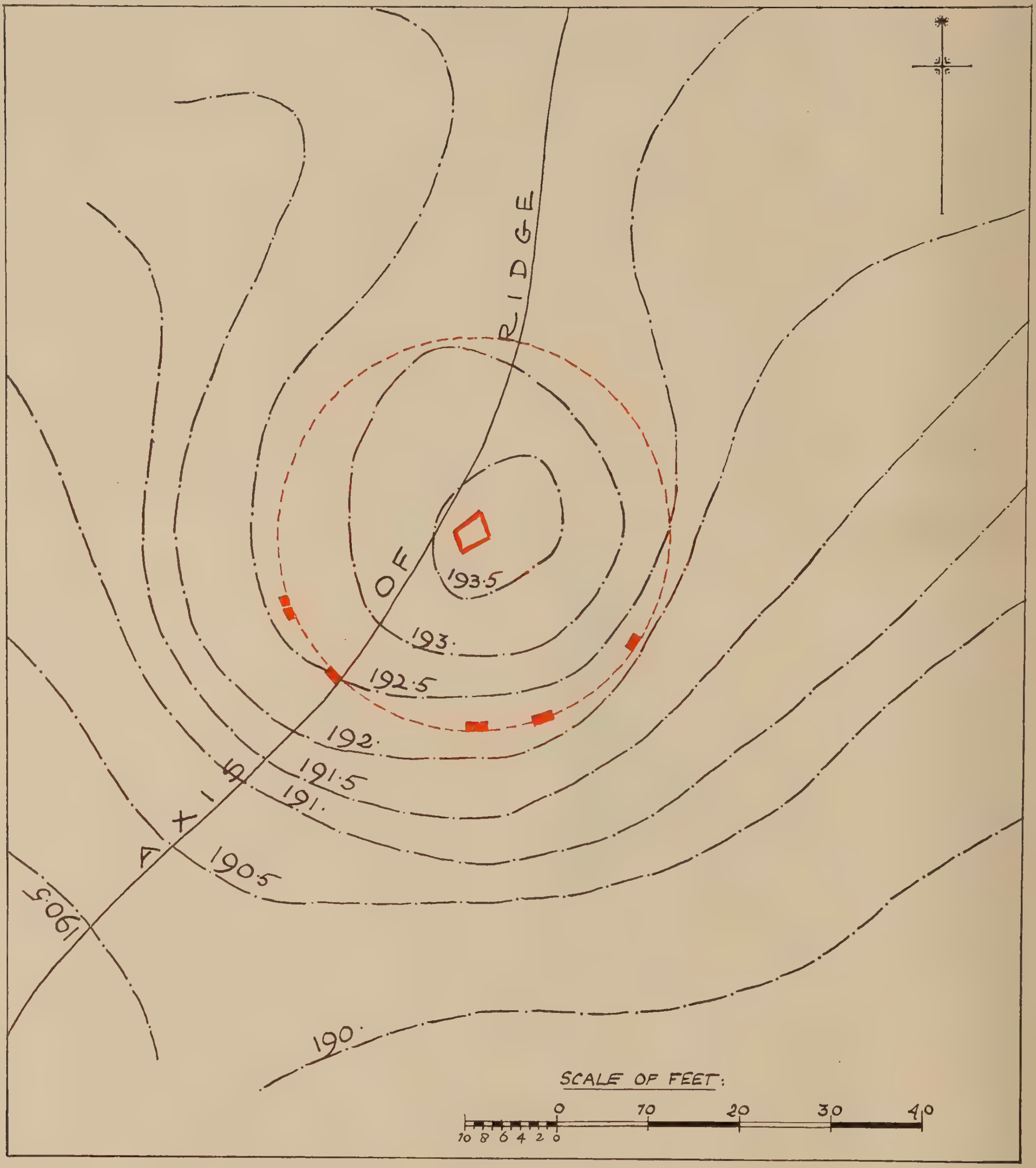
RIDGE
OF
AXIS
193·5
193·
192·5
192·
191·5
191·
190·5
190·5
190·
SCALE OF FEET:
0
10
20
30
40
10 8 6 4 2 0

Simondston Cairn: the site area contoured, artificial constructions in red

Note.—The thrust-blocks are exactly placed in relation to a true circle (the broken red line) centred on the cist

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one-third of a mile to the east (fig. 2). Pl. XXXIX, 1, shows the site of the cairn as seen from Brackla Hill, and pl. XL based on Mr. Hall's survey, its exact contours.

Excavation began on 12th April 1937, and the work took one month to complete, three men being employed.

Under the turf there was about a foot of soil, the whole area having been arable until recent times. When this was removed a layer of stones or boulders was disclosed. A trial trench revealed the ancient surface soil under the stones; under that again was a layer of clay, then rock. The rock here, as at Brackla Hill, is Lias, a formation extensively represented in the Vale of Glamorgan and which 'here consists of alternations of limestone and shale'. The clay (which everywhere overlies the rock to a thickness of 3 to 18 in.—see section, pl. L) has resulted from the disintegration, *in situ*, of the limestone and shales.[1]

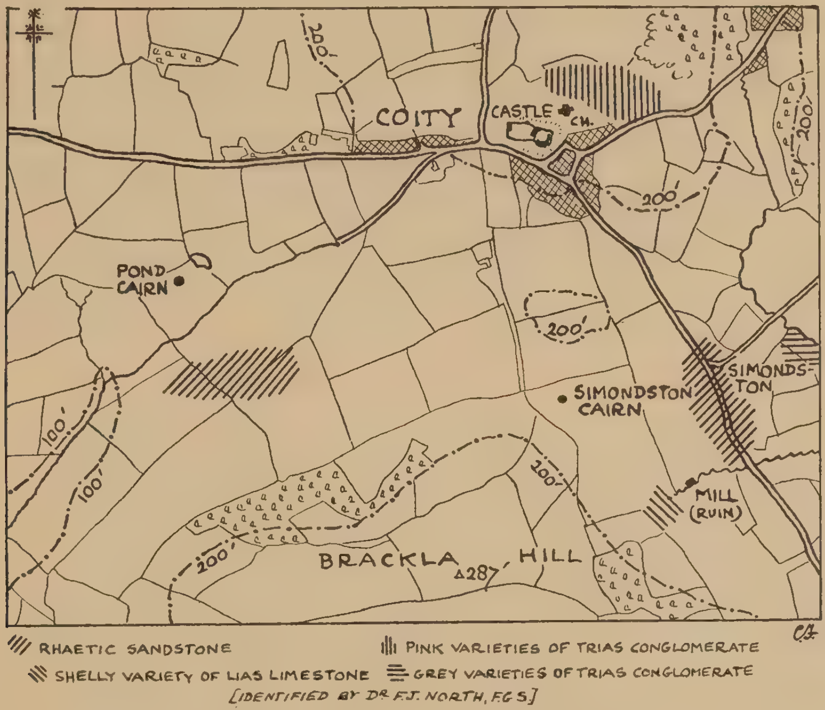
COITY
CASTLE
CH.
200
POND CAIRN
SIMONDSTON CAIRN
SIMONDS-TON
100
200
MILL (RUIN)
BRACKLA
287
HILL
C.A.
RHAETIC SANDSTONE
PINK VARIETIES OF TRIAS CONGLOMERATE
SHELLY VARIETY OF LIAS LIMESTONE
GREY VARIETIES OF TRIAS CONGLOMERATE
[IDENTIFIED BY Dr F.J. NORTH, F.G.S.]

Fig. 2. Map of Brackla Hill area, showing the two cairns, and the sources of the cairn stones. Scale 4 in. to 1 mile

The Primary Burials. In the centre of the mound the large side-slabs of a cist, obviously marking the primary burial, were visible in the stony layer (pl. XXXIX, 2). The cist measures 3 ft. 5 in. by 2 ft. 9 in. internally (floor measurement); its longer axis was aligned north-east to south-west (see plan, pl. XLIX). The cover slab or lid had gone and the cist was filled with loam. Removal of this soil disclosed two urns of 'enlarged food-vessel' type (numbered A 1 and A2), placed, inverted, at either end of the floor (pl. XLI, 1). The urns were ill-baked and had partially collapsed in antiquity: having been, moreover, exposed to an unusual degree to wet, they were in a condition of disintegration, having indeed less cohesion than the surrounding clayey soil. Both urns are illustrated on pl. XLVI and fig. 3 and are described in detail in Appendix I. They contained burnt bones.

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[1] The description of the formation is provided by Dr. North.

The floor of the cist also was covered with burnt bones, which, mixed with fine earth, filled the crevices between side-slabs and floor, and which on the south side were found at an even lower level. There was no burnt clay with the bones, which were clean, and very little charcoal. Mr. H. A. Hyde identified the few fragments as mountain ash.[1]

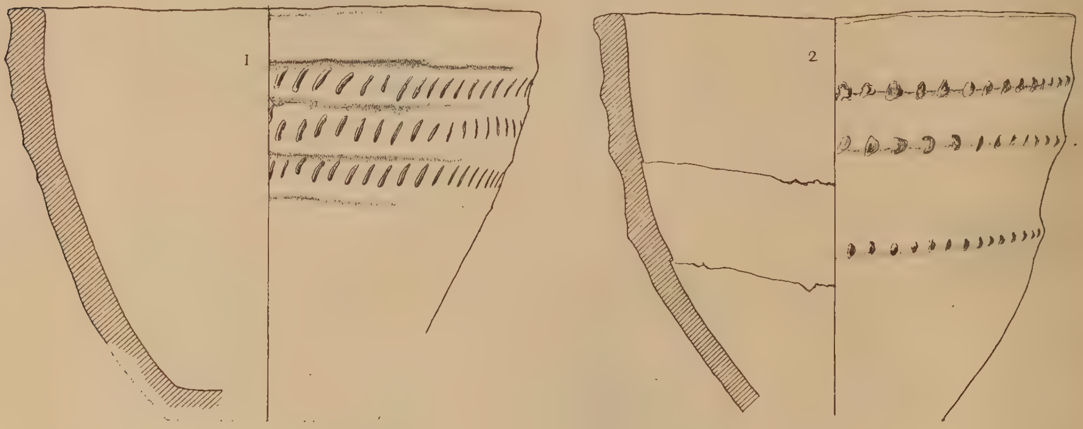

Fig. 3. Simondston: Urns A 1 and A 2 ($\frac{1}{4}$). See also pl. XLVI

Adjacent to the urn A 1, on its south side, was a knife; a flake of unweathered flint showing the cortex in two places, chipped into an ogee outline, possibly in imitation of a bronze blade. Adjacent to the urn A 2 was a flint fabricator whose rounded point shows the smoothed surface characteristic of that tool.

A third associated object is a small hemispherical cup 45 mm. in greatest breadth. It came from the lowest layer of soil between the urns, i.e. in the centre of the cist; but that it was actually on the floor cannot be asserted. Being a natural object, its importance was not recognized at the time; but Dr. North reports that it represents the oxidized surface layer of a nodule of marcasite,[2] derived from the chalk, the nearest outcrops of which are in

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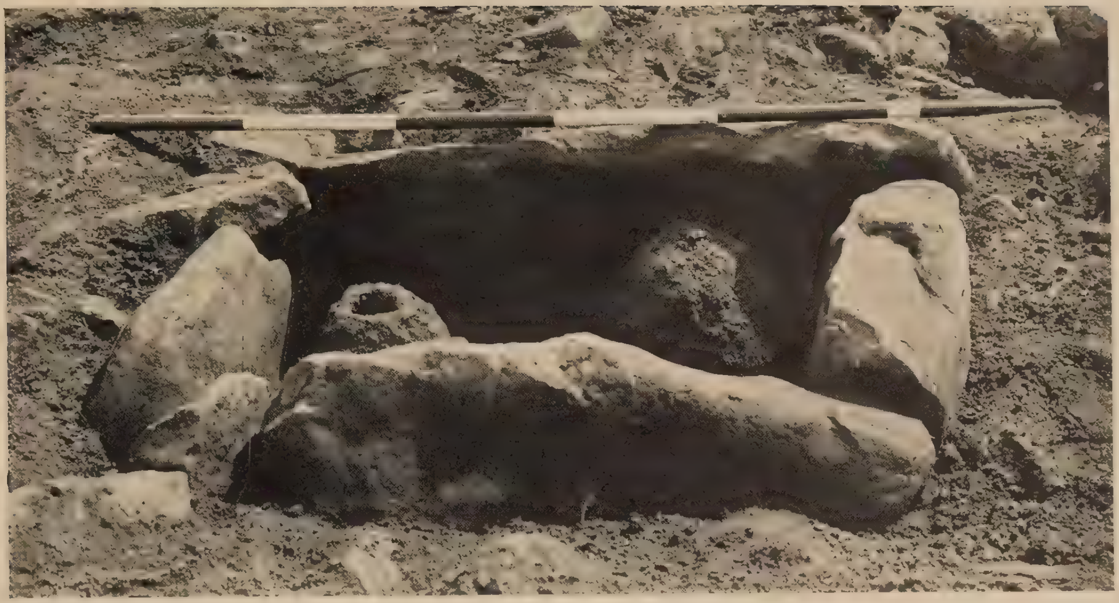
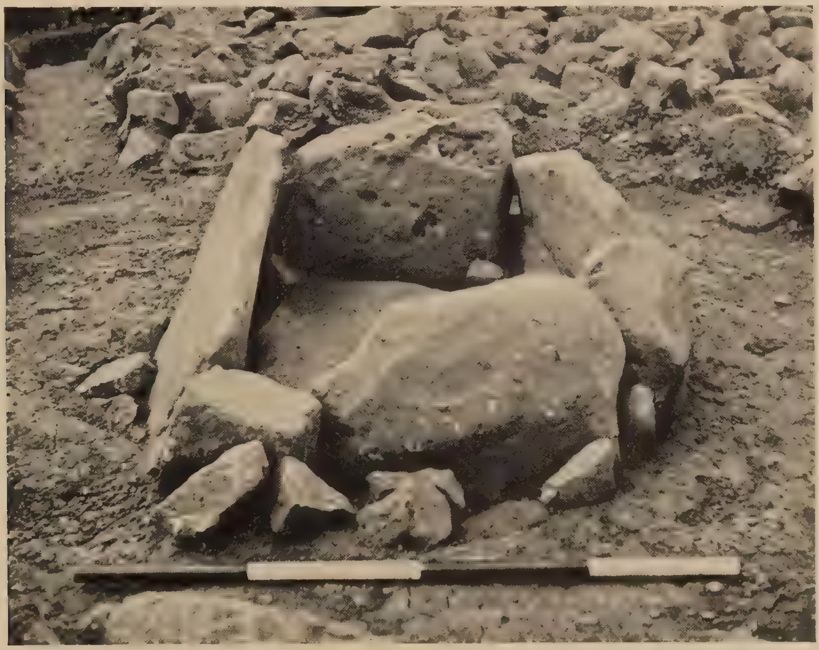
[1] The identifications of the charcoals in this paper are derived from Mr. Hyde's report, Appendix IV.

[2] This and subsequent geological descriptions are based on Appendix V.



1. Simondston Cairn. The cist immediately prior to the removal of the urns



2. The cist cleared externally down to original ground-level, showing position of cup-marked slab (left bottom corner of cist)

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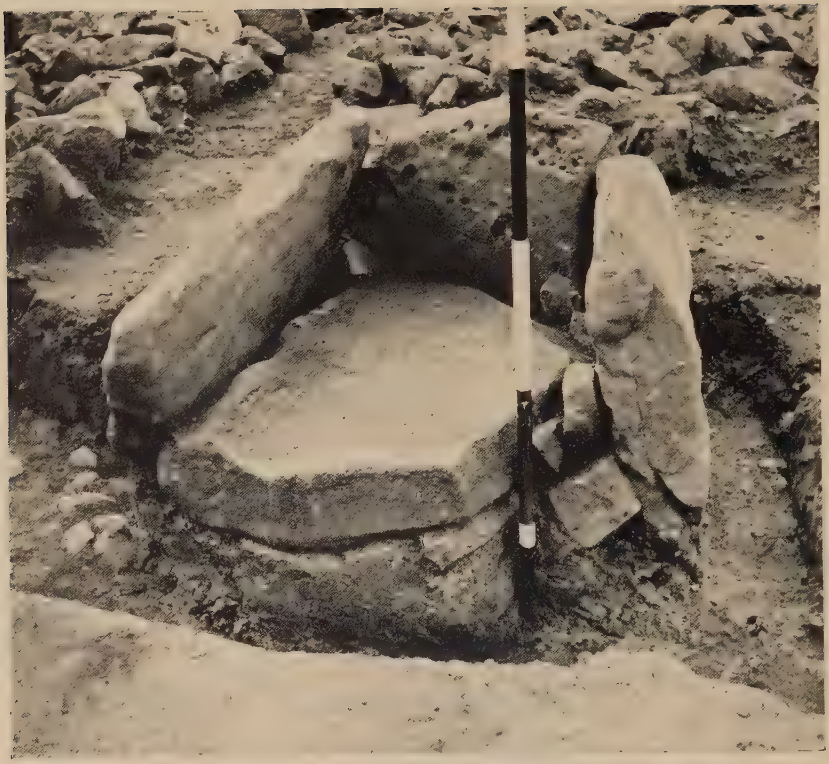
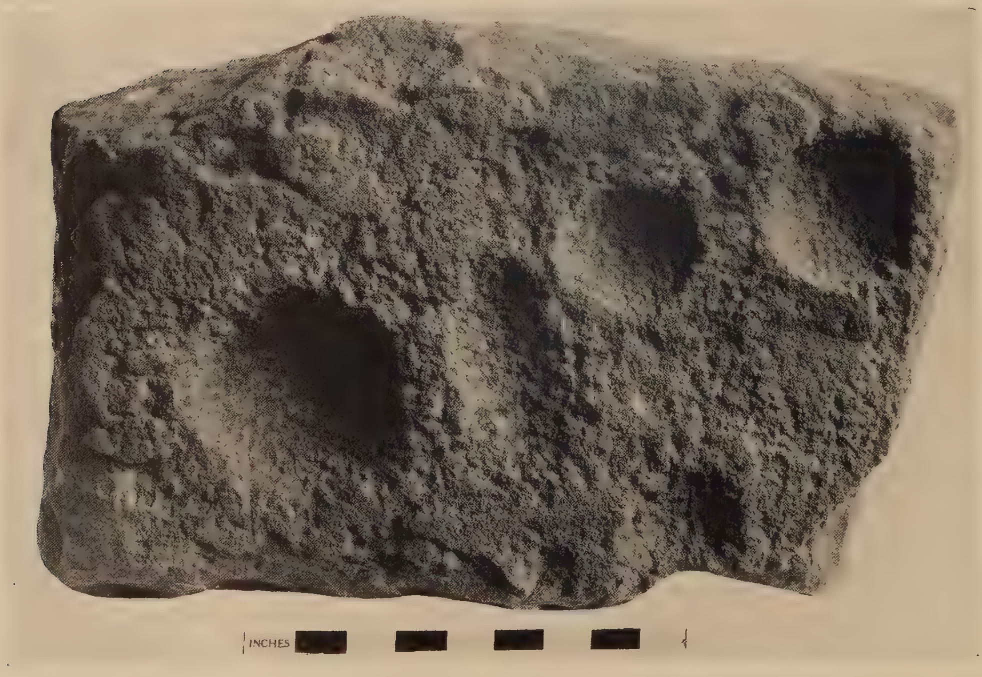


1. Simondston Cairn: the cist cleared to rock level; three side slabs removed to show constructional details



2. Simondston Cairn: the cup-marked slab

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Wiltshire and Dorset. That Bronze Age man collected natural objects of striking form has several times been noted: the most famous example is the group of fossil *echini* in the Dunstable Downs burial recorded by W. G. Smith,[1] but these were of local origin. Dr. North reports that the material for the implements also was imported and could not have been obtained from local (beach) flint. These associated objects are illustrated on pl. XLVII, 1 and 3, and are described in detail in Appendix I.

Mr. L. F. Cowley (Appendix II) records that the bones from the urn A 1 were those of one adult; the bones from the urn A 2 were of two persons, an adult and a child. It is tempting to consider that we have here the burial of a man and woman and her child, and that the three objects in the cist, the knife, the fabricator, and the cup, were included as being symbolically suitable to the character, age, or function of each.

Finally it should be recorded that the *top* layers of the filling of the cist, i.e. the soil above the bases of the urns, contained a small amount (1 to 2 ounces) of burnt bones, thinly scattered in the soil. The only suggestion which can be offered is that these may represent a secondary deposit, centrally placed in the cairn, part of which fell into the cist when the lid was disturbed. Mr. Cowley was unable to make any determination from this material, except that it was human.

The cist itself was made with the greatest care and was a very stable construction of weathered slabs of Rhaetic sandstone; it can be seen in section in pl. L. The procedure was as follows:

A hole was made in the clay subsoil of such a depth as to bring the top edge of the floor-slab—which was very thick and heavy—up to ground level. It was wedged up on one side with a small block of sandstone (freshly fractured, a rare occurrence in this cairn). A narrow trench was then cut down all round to rock level—here 1 ft. 4 in. below ground level—and the side-slabs placed in position. Gaps were blocked with smaller stones and the irregular bases of the slabs carefully and firmly wedged up. Pl. XLII, 1 shows the appearance when half the side-slabs were in place. The side-slabs were unwrought with one exception—that at the eastern angle, which was probably the last stone to be put in place: see pl. XLI, 2. This small slab had probably been roughly squared; on its inner face five shallow holes had been pecked in the Neolithic manner (pl. XLII, 2). Cup-marked slabs have been noted in chambered tombs in Wales (Pembrokeshire and Caernarvonshire),[2] but not previously in a round cairn. Three isolated and undatable cup-marked menhirs are known on the Glamorgan borders.[3]

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[1] See Windle, *Remains of the Prehistoric Age in England*, fig. 60, p. 144.

[2] See Wheeler, *Prehistoric and Roman Wales*, p. 82, and *Bulletin of Board of Celtic Studies*, viii, 270.

[3] Wheeler, *op. cit.*, p. 82, and at Bargoed, Glam. (unpublished).

When the cist had been built, the narrow trench surrounding it was carefully packed with clay and stones (section, pl. L). It only remains to add that the subsoil under the floor-slab was undisturbed clean clay.

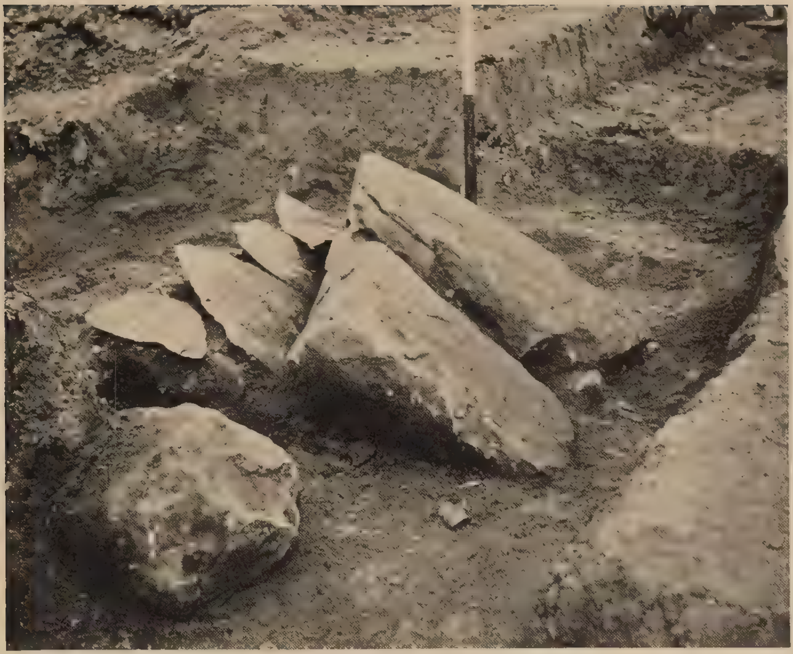
The Cairn Structure. The next step was to determine the size and character of the cairn. Its size will first be considered.

A circular area 40 to 50 ft. in diameter was cleared, every stone disclosed being left in position. At distances of 20 to 21½ ft. from the centre of the cist, on the south side, six earthfast slabs were noticed, so spaced as to cover one-third of the circle (two being closely set). The stones measured from 2 ft. 6 in. to 2 ft. 11 in. in breadth (except the pair, together 3 ft. 1 in. broad) and were all about 2 ft. in height. Their position was in every case tangential to the circle, and, having regard to the primitive character of the work, surprisingly exact in the matter of radial distance (see pls. XL and XLIX). It was obvious that they marked the limits of the cairn, and from them its original diameter was securely determined as a close approximation to 43 ft.

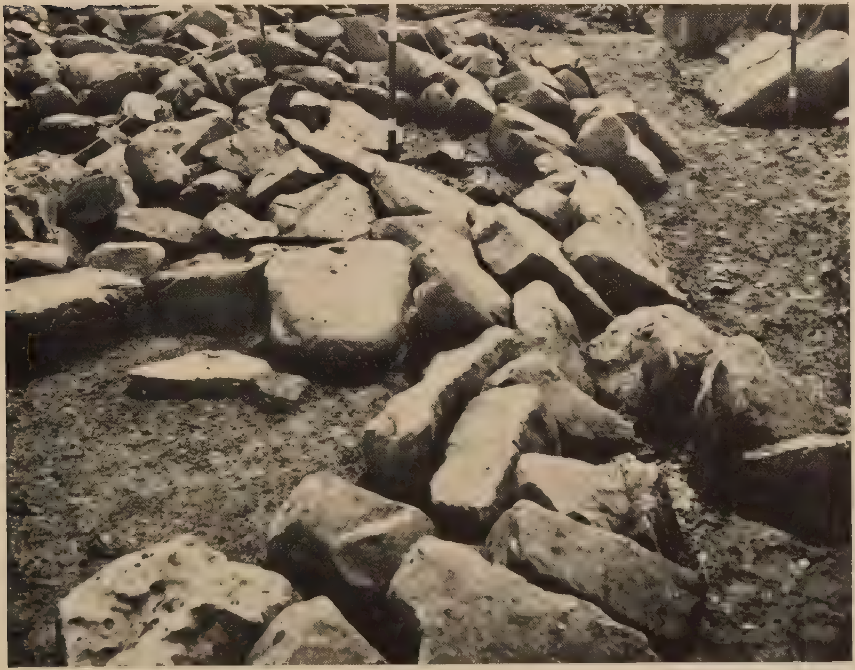
All the six stones were leaning outwards at an angle of approximately 45°, and smaller stones were visible beneath them; it appeared, then, that we could not be dealing with a normal peristalith. The slabs were therefore lifted out. Behind each were stones carefully bedded in rows and layers, the lowest layer in each case resting on a ramp of undisturbed clay subsoil at the same angle; it was certain therefore that the slabs themselves had been placed originally in the sloping position in which they were found. In many cases thin slabs were carefully selected for the under layers. On pl. L one such group of stones is seen in section—these are unusually large. In pl. XLIII, 1 the pair of slabs numbered V has been photographed after being cleared down to its bases; here thin slabs take the pressure of the main blocks, and a third layer of stones is hidden under these.

These constructions provided a problem for which, so far as we were aware, the literature of cairns offered no solution. The only valid reason for such a lay-out—typically a thick slab in front, and thinner flat ones behind set on a sloping face of undisturbed clay reinforced with small round stones pushed into it—seemed to be to resist pressure; and the pressure could only be that of the cairn itself. Each group of stones represents, in short, a *thrust block* or bedded buttress, in which the initial pressure was taken by the surface of the carefully chosen upper slab, and was extended outwards by the slabs (usually broader and thinner) below; each thrust block played its part in rendering the cairn stable.

This conclusion stimulated a fresh study of each unit. No. I was seen to be incomplete, the upper stone having been removed. No. II was also incomplete, the overlap of the stone in its rear showing that it was originally a double



1. Simondston Cairn: thrust-block V (double), showing thin slabs placed behind on a sloping face of undisturbed clay



2. Simondston: the cairn structure, western side. Thrust-block V in top right corner

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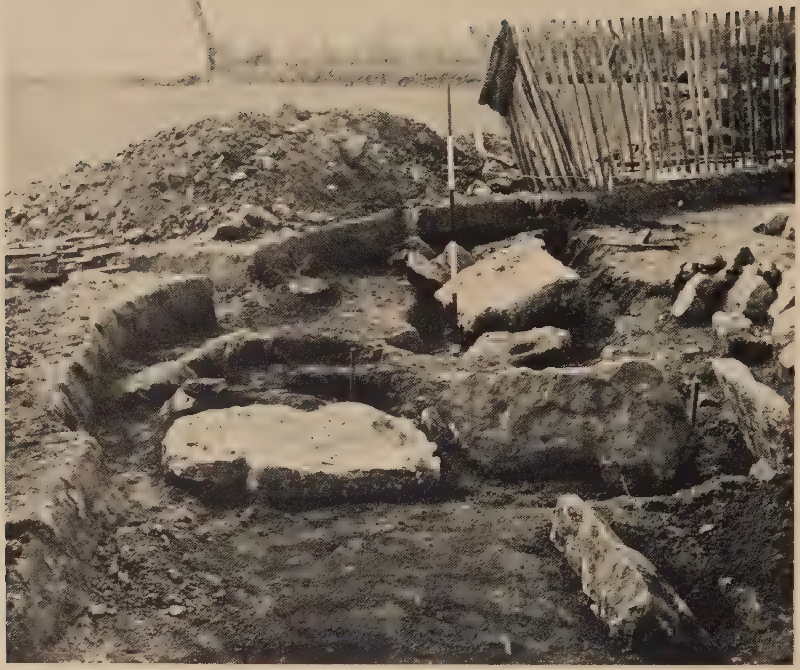
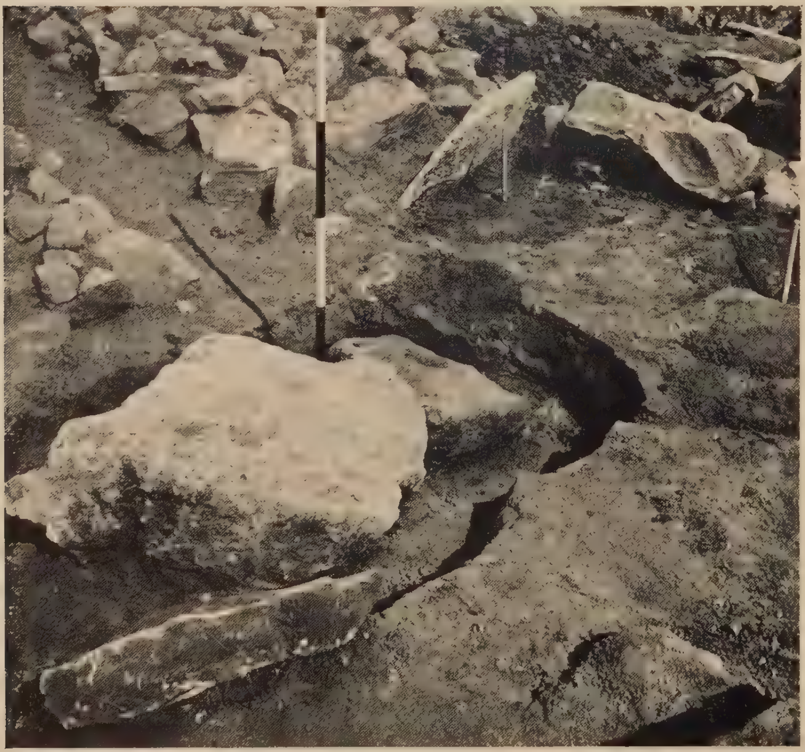


1. Simondston Cairn: part of the southern complex, from the east, showing: (*a*) thrust-blocks III and IV; (*b*) earthfast slabs defining two sides of cremation area B; (*c*) Trias slabs D, E, F, and G prior to investigation



2. The same, from the west, showing Trias slab F, overlying (and therefore later than) thrust-block IV

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unit like V (see plan, pl. XLIX). Again, the placing of supporting stones in cup-like fashion on either side of the thrust-block system in V and on one side (east) of II showed that the thrust blocks were designed as isolated units, not as a continuous border to the cairn; this was confirmed by testing the clay subsoil in several places between them: it was undisturbed. While the thrust blocks themselves were always of sandstone, the underlying slabs were of varying lithological character; for example, grey limestone conglomerate was used in I, red limestone conglomerate in II and V,[1] and Lias limestone nodules were common in the lowest layers of several. The choice of material was based evidently on physical character; thin slabs were preferred, and the sandstones of which the cairn was composed did not provide such.

We thus determined the purpose of the peripheral slabs on the southern rim; an explanation which accounts for their absence on the remaining two-thirds of the circumference of the cairn. For if the contoured site plan, pl. XL, be referred to, it will be seen that the natural slope of the ground is towards the south, and that the thrust blocks are placed only where the slope, slight everywhere, is most marked: that is only where the outward and downward thrust exerted by the weighty and high-piled cairn was in wet weather likely to cause movement of the clayey soil and so disturb the tomb structure. It is probable that thrust blocks at intervals are as effective as a continuous line; and it may be added that while the blocks cannot, as we have seen, have been continuous, the full number has not necessarily been determined owing to later disturbance of the ground on the southern periphery.[2]

We may now consider the structure of the cairn mass. The diameter we have been able to determine suggests that its original height may have been as much as 8 ft. The mass had, however, been robbed down to a maximum thickness of 1 ft. 9 in.; it was very irregular in outline and at no point reached outwards to its thrust blocks (see plan, pl. XLIX, and pls. XLIII, 2 and XLV, 1). The information to be gained from the surviving elements was thus bound to be meagre.

After the stones had been cleaned two features were observable, both being illustrated in pl. XLIII, 2 and in the plan. The first was a tendency, especially on the periphery, to lay stones sloping inwards,[3] the one resting partly on the other; the second was the tendency to greater regularity on the periphery, as shown by the surviving stones near the western margin.[4] There was (in these, the lowest and only surviving layers of the cairn) no other evidence of constructional pattern or frame.

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[1] Identification by Dr. North (see Appendix V).

[2] Lying to the south-east of thrust block III (see plan) is a small and thin slab of grey limestone conglomerate tilted on a floor of small stones set in clay. It looks like the *lower* members of a thrust-block unit. But its position precludes such an interpretation, and I cannot explain it.

[3] This feature is recorded in the case of a cairn at Wedlake, Dartmoor (*Devon. Assoc. Trans.*, 1899, pp. 152–3).

[4] Isolated stones similar to those in the cairn structure were found to be scattered around outside

The whole cairn was then removed to see whether any *earth-fast* stones formed part of its structure. There was none.[1] All the cairn stones were seen to rest on—or be pressed into—the original surface soil. The floor of the cairn was free from charcoal layers, traces of a pyre, or burning of any sort.[2] The area around the cist bore no signs of trampling, or of any ritual acts. Furthermore, in order to determine whether any small filled-in 'ritual' ditch surrounded the cist,[3] a sectional trench was cut down to rock level (S—S′, pls. XLIX and L). The Lias clay subsoil was found to be entirely undisturbed. The variations in rock level shown in the section on the latter plate are quite normal. Finally, to see whether a rock-cut ditch surrounded the cairn, the main section, S—S′ on plan, was extended outwards for 20 ft. beyond the cairn limits on the north side; with negative results.

The Secondary Burials. The reader will have observed that two large earthfast slabs, prominent in the plan (pl. XLIX) near the southern rim of the cairn, have not yet been referred to.

The thin slab of shelly limestone of Liassic age[4] (p. 178), marked U on the plan, set tangentially to the circle, 3 ft. 8 in. long, may first be considered. It was leaning outwards. Excavation showed it to have been set in a trench cut down to the rock and packed on the south side with small stones. The larger and thicker boulder marked W, set radially to the circle, which was also 3 ft. 8 in. long, was placed in a large hole, the more upright face of which was to the west. (See pl. XLIV, 1 and 2.)

A small area within the cairn boundary was thus protected on two sides against the thrust of the cairn structure: it was found to include a number of cremation burials which are clearly later intrusions (see the plan and pl. L which gives north-north-east to south-south-west and north-west to south-east sections of the area). The position of these, on the south side of the cairn, is in accordance with usage frequently noticed in the literature of barrows.

Cremation B 1. An urn was found which had been placed, mouth down-

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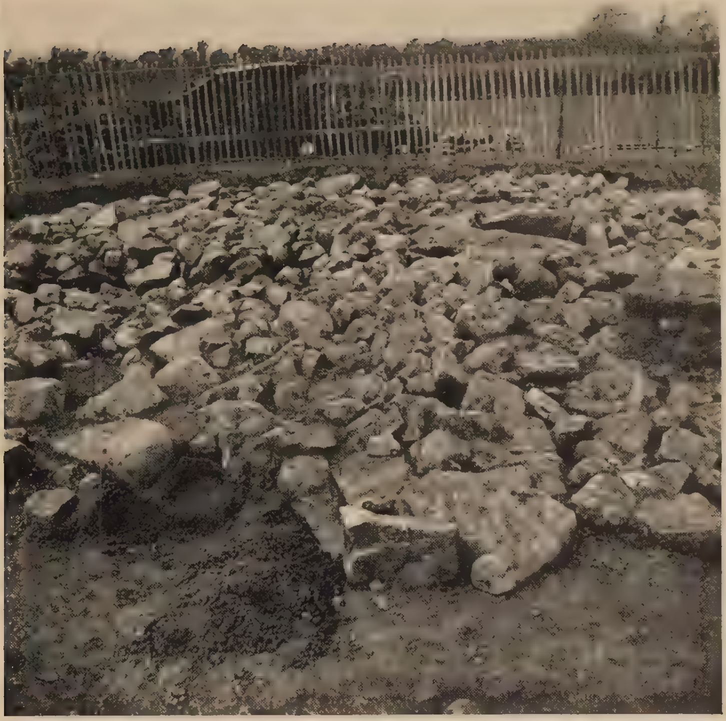
the present irregular limits of the cairn on the south, but very few on the north. On the south, again, these stones were seen to extend far down the gentle slope along the trench shown on the plan. On the other hand, a trench cut beyond the original limits of the cairn on the north side showed not a single stone. The cairn, then, collapsed, or was thrown down, mainly to the south—the side where the thrust blocks are. None of these 'loose' stones is plotted on the plan, save possibly in the north-west quadrant, where the irregularly placed stones on the rim of the cairn may or may not be *in situ*.

[1] Those shown on the plan are secondary. See below.

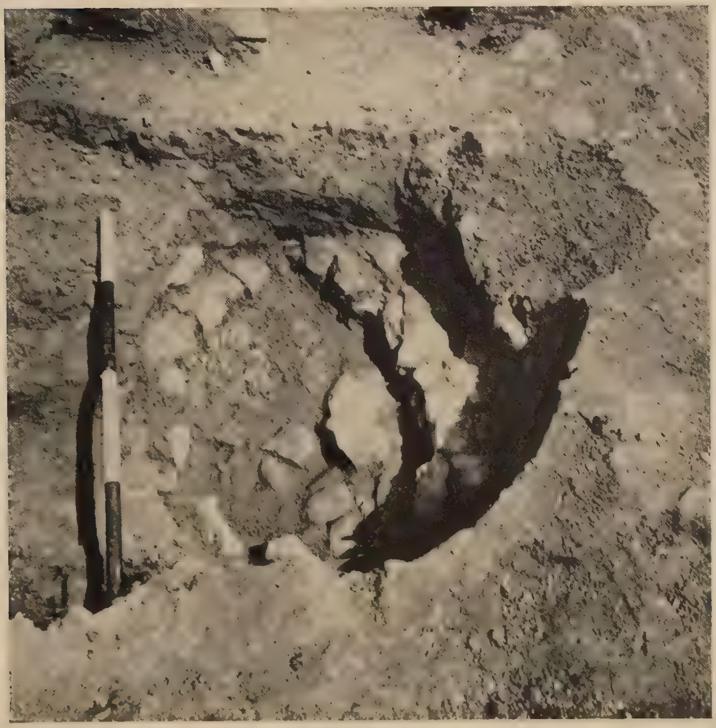
[2] Flecks of charcoal were present everywhere in the original surface soil, inside and outside the cairn limits; I do not think they have any significance. Occasional spalls of flint were also met with.

[3] Bearing in mind my experience at Ysceifiog, *Arch. Camb.*, 1926, p. 52.

[4] Dr. North has determined its source: see fig. 2 and Appendix V.



1. Simondston Cairn: cremation C, in left foreground



2. Simondston Cairn: the pit under Trias slab E

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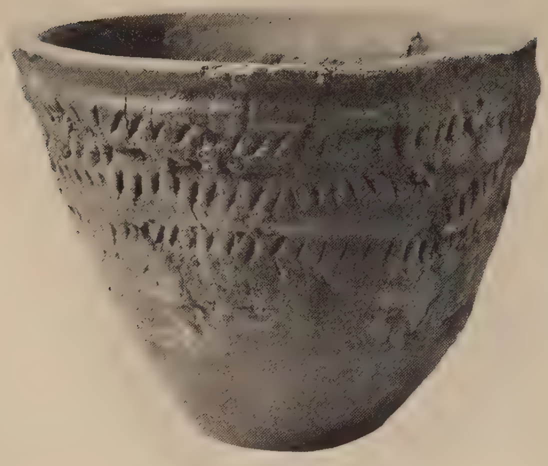
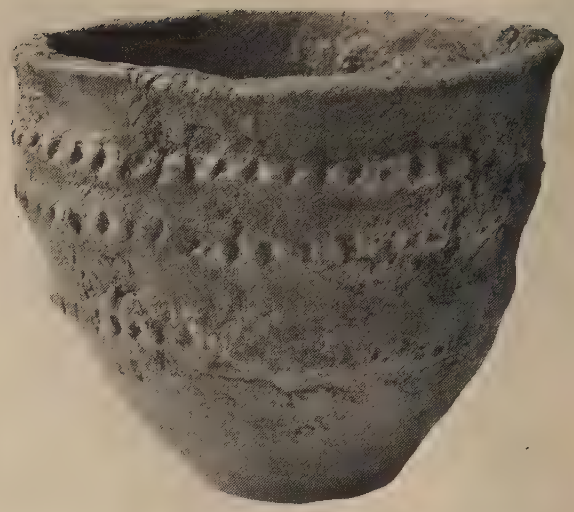
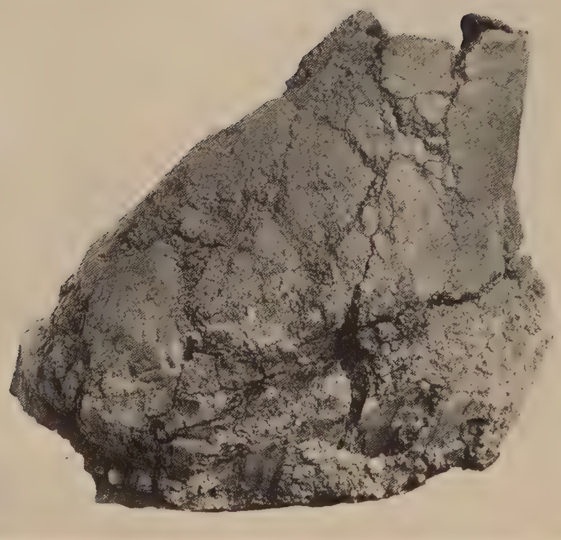
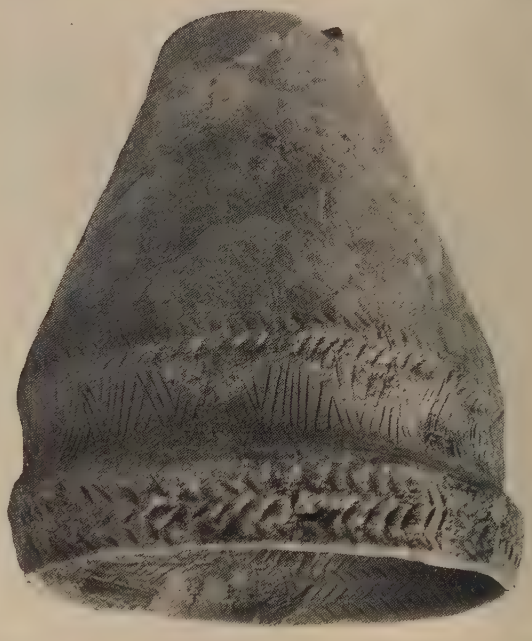

1. Urn A 1


2. Urn A 2


3. Urn B 1


4. Urn B 1 (restored)

Simondston Cairn: urns A 1 and A 2 and B 1. B 1 (as restored) is shown upside down for comparison with condition as found

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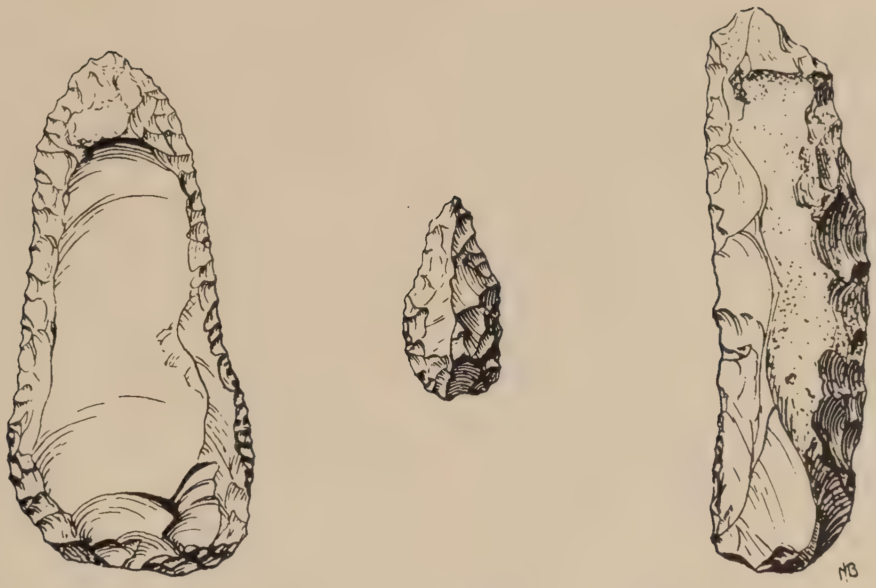
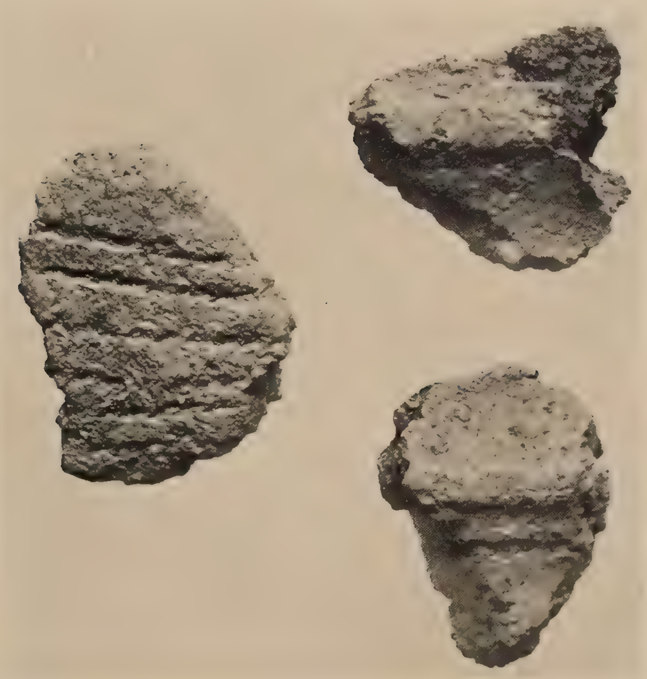
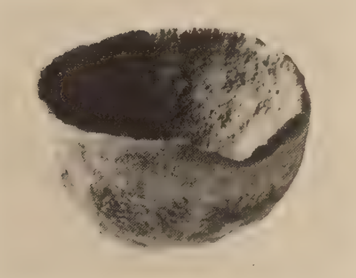


1. Flint implements ($\frac{1}{1}$). Knife on left and fabricator on right, from cist; the implement in the centre was probably associated with cremation B 3





3. Marcasite cup from cist ($\frac{1}{1}$)

2. Urn fragments, B 3 ($\frac{1}{1}$)

Objects from Simondston Cairn

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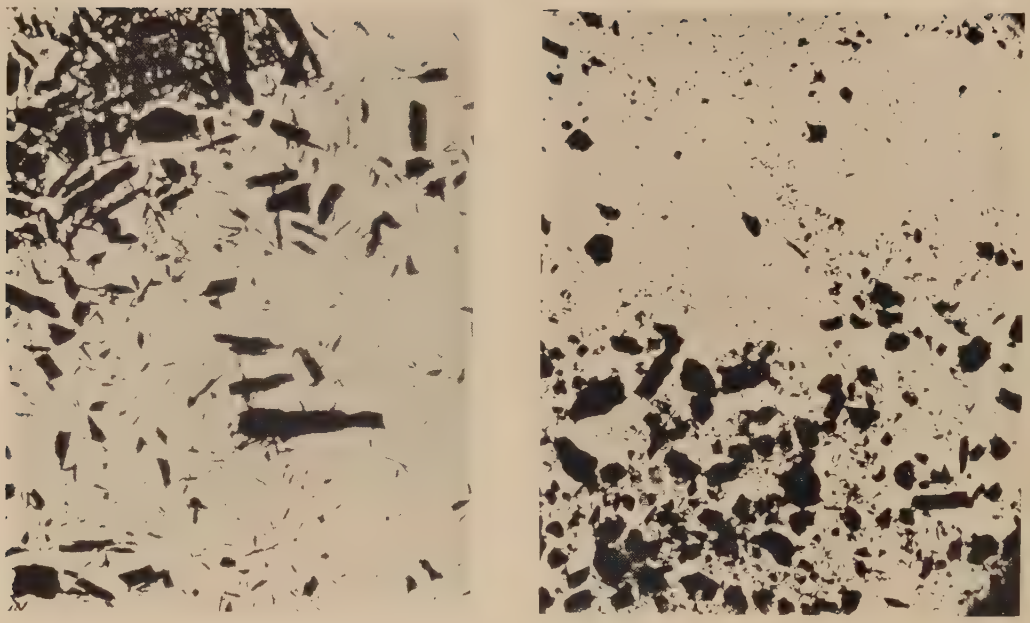
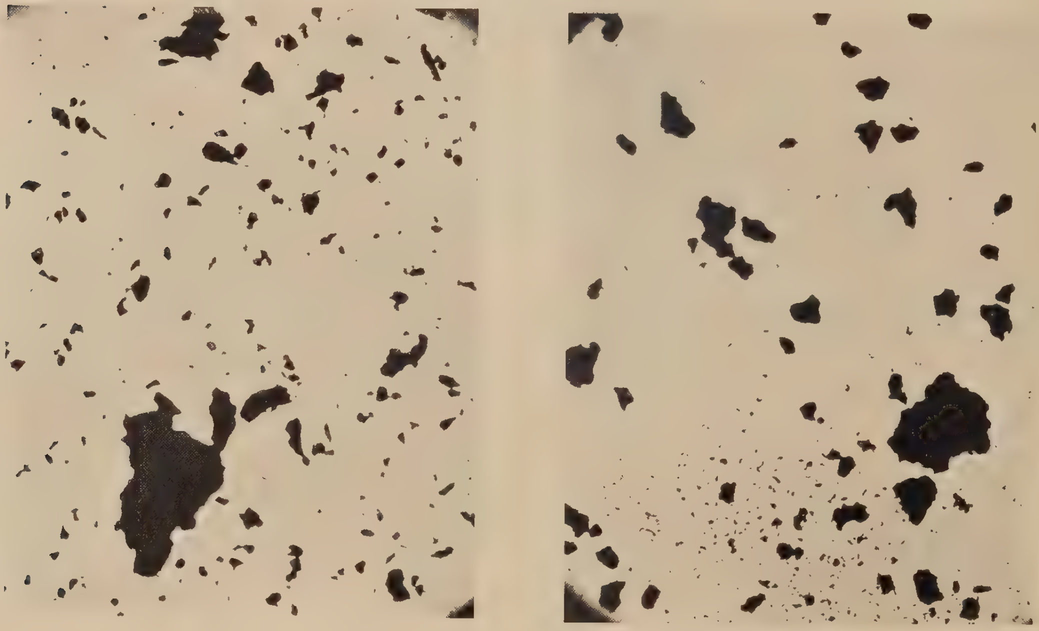


A. Charcoal from debris, crushed

B. Lighter portion of fine carbonaceous material in the clay-fuel-bone mixture



C. Coke from debris, crushed

D. Heavier portion of the fine carbonaceous material

Simondston: Photomicrographs of wood charcoal, and coke from cremation B 1

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wards, close to the thin slab of shelly limestone, 10 to 11 in. below natural ground level. It was pressed into and surrounded by a 'black layer', which extended over an area some 3½ by 4 ft., consisting of much burnt bone, charcoal, and reddened clay: this was not itself a pyre for the underlying yellow clay subsoil was unburnt. The urn contained a layer of burnt bones, and a black mass of burnt material in the mouth, similar to that surrounding it, except that no red clay was seen. It was not as badly fired as the urns in the central cist, A 1 and A 2, but it had been deformed and disintegrated by the pressure of the leaning slab (pl. XLVI, 3). Such deformation afforded proof that this slab was originally set upright, and it is so shown in the plan of the cairn.

The urn when restored (fig. 4 and pl. XLVI, 4) was found to be of different character from A 1 and A 2, being a collared or overhanging-rim urn of Abercromby's type I, phase i. It was not practicable to differentiate between the burnt bone and charcoal in, and that extending beyond, the pot. Mr. Cowley reports (Appendix II) that this large mass of bones (8 lb. 4 oz.) represents the remains of an adult and two children.

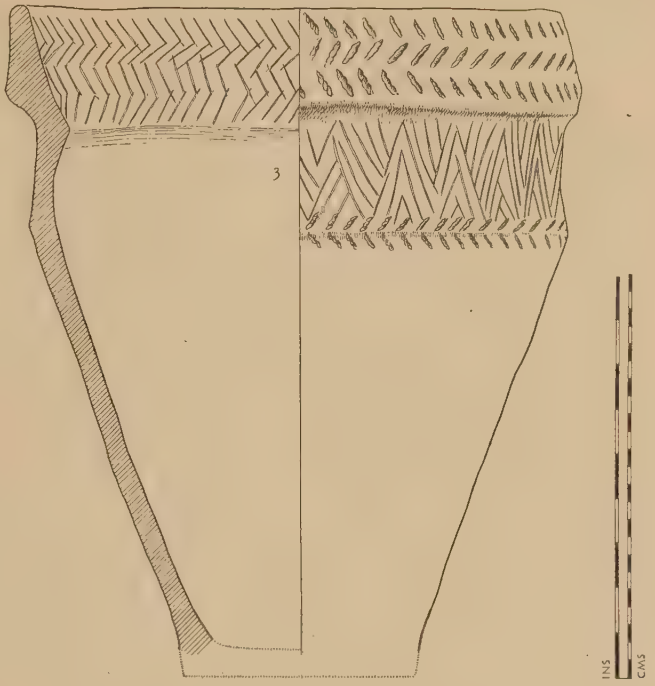

Fig. 4. Simondston: Urn B 1 (¼). See also pl. XLVI

Some of the burnt material—the 'black layer'—was submitted to Dr. North. He reported that while most of the fuel used was wood charcoal, there was an appreciable amount of coal. He adds that it resembles the coal which occurs along the southern margin of the South Wales coalfield, the nearest exposures being about 1½ miles to the north of Simondston (see Appendix V and pl. XLVIII). This is probably the first recorded use of transported coal for fuel in Wales. Lying in the burnt material was a curved flake of red sandstone owing its shape to heating and quenching, which Dr. North thinks must have come from a glacially transported boulder forming part of a hearth or fireplace.

Mr. Hyde examined several samples of the charcoal and its matrix from both inside and outside the urn. He found that the wood fuel was predominantly oak, but that ash also was present.

Cremation B 2. Immediately above this cremation layer, close to the radial slab V, practically on the original ground level, was a second cremation deposit, B 2 (see section, pl. L). This consisted of a bunch of clean, burnt bones, in the centre of which lay the much corroded remains of a bronze pin or awl, having a minimum diameter of 0·05 in. Clearly the deposit had been placed in a bag secured with the pin, and inserted in a small hole made in the soil which covered B 1. Mr. Cowley reports this material as belonging to two persons, an adult and a child (Appendix II).

Cremation B 3. Of this cremation little can be known. Lying outside the probable limits of the original cairn (see plan and pl. L), it consisted of fragments probably of one urn, anciently broken, and a few fragments of burnt bone scattered (by the plough ?) over a limited area, which approximated to the original ground level. In the burnt bone Mr. Cowley identified a few fragments of human teeth.

The urn fragments showed typical twisted cord ornament characteristic of the fully developed Bronze Age, and was later than the urns A 1, A 2, or B 1. See Appendix I and pl. XLVII, 2. Close to one of the pieces of pottery was a delicately worked flint tool (pl. XLVII, 1).

Cremation B 4. To the west of the western margin of the B 1 cremation and at a lower level than it, was a reddish black mass of burnt clay and charcoal overlying some finely comminuted bone, approximately circular, 14 in. by 12 in. in diameter, and 2 in. thick. It was placed in a hole in the clay subsoil, which had been refilled with clay. This cremation is shown in section on pl. L, and is seen to the right of the pole in pl. XLIV, 2. A portion of a human tooth and phalanx of a digit were determinable, Mr. Cowley reports. Mr. Hyde was able to identify ash and hazel in the 'black mass'.

Cremation C 1. The cairn yielded in addition to the B group of deposits one isolated secondary cremation.

This deposit occupied a space some 14 in. in diameter between the stones of the cairn on the south-east side, 16 ft. from the centre (see pl. XLIX), 4 in. above the natural ground level. It was on clayey earth, and consisted of a ring of dark reddish clay ½ to 1 in. thick, interspersed with specks of charcoal surrounding a circular deposit of burnt bones, 8 in. broad and 3 in. deep in the centre. There were a very few bits of charcoal (Mr. Hyde identified oak) with the bones which, apart from soil filtered down from above, were clean. All the clay, red or normal, must have been brought from outside and put in the hole. When the bones were taken out the receptacle looked like a bird's nest (pl. XLV, 1). The bones represent in all probability one individual, Mr. Cowley reports. The position, in relation to heavy adjacent stones,[1] shows that a space was cleared

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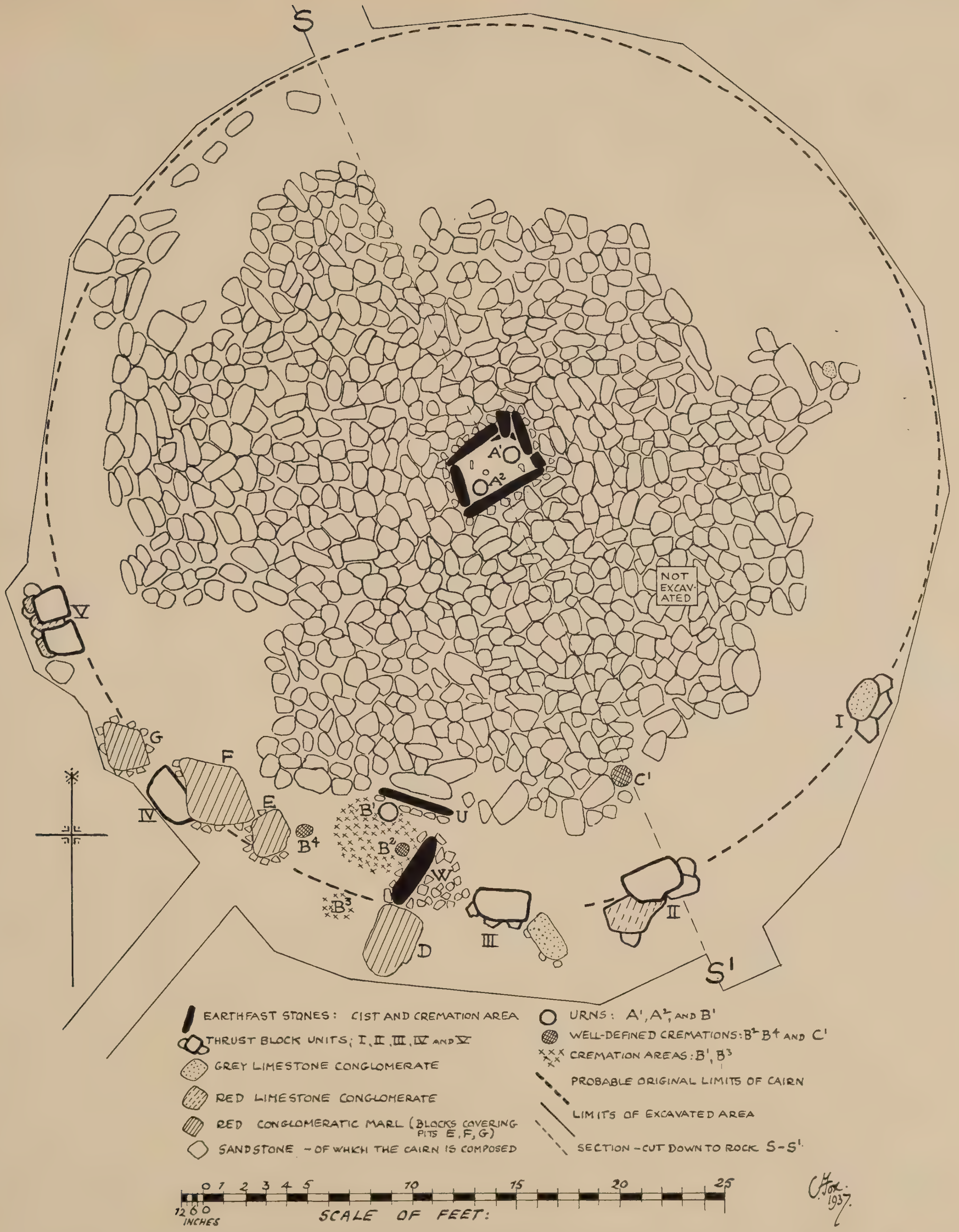
[1] Outside the burnt clay ring, ordinary clayey soil was packed up against adjacent stones.


S
A'
A²
NOT EXCAV-ATED
V
G
F
IV
E
B⁴
B'
U
B²
W
B³
D
III
II
C'
I
S'
EARTHFAST STONES: CIST AND CREMATION AREA
THRUST BLOCK UNITS; I, II, III, IV AND V
GREY LIMESTONE CONGLOMERATE
RED LIMESTONE CONGLOMERATE
RED CONGLOMERATIC MARL (BLOCKS COVERING PITS E, F, G)
SANDSTONE - OF WHICH THE CAIRN IS COMPOSED
URNS: A', A², AND B'
WELL-DEFINED CREMATIONS: B² B⁴ AND C'
CREMATION AREAS: B', B³
PROBABLE ORIGINAL LIMITS OF CAIRN
LIMITS OF EXCAVATED AREA
SECTION - CUT DOWN TO ROCK S-S'
12 6 0 INCHES
0 1 2 3 4 5 10 15 20 25
SCALE OF FEET:
C. Fox. 1937.

Plan of Simondston Cairn

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in the cairn and the bones inserted—the deposit was definitely not contemporary with the primary burials in the cist. There was no trace of bronze.

Tabular Summary of the Cremations

A 1	Urn	Flint knife	In cist (north end) beside cup-marked stone. Burnt bone in urn and on floor. One adult. Very little charcoal (mountain ash identified). No red clay.
A 2	Urn	Flint fabricator. Natural cup (marcasite)	In cist (south end). Burnt bone in urn and on floor. One adult, one child. No charcoal. No red clay.
B 1	Urn	—	Much burnt bone with charcoal in urn; extensive layer of charcoal (much oak and some ash identified), red clay and much burnt bone around urn. One adult and two children.
B 2	—	Bronze pin	Burnt bones, clean. One adult and one child.
B 3	Urn (fragments)	Flint point (? associated)	Burnt bones (disturbed).
B 4	—	—	Localized layer of charcoal (ash and hazel identified), red clay and some finely comminuted bone.
C 1	—	—	Burnt bones, clean, set in 'nest' with walls of reddened clay. Very little charcoal (oak identified).

The 'Trias' Slabs. The plan of the cairn shows on the south side four large slabs, lettered D, E, F, and G, of red conglomeratic marl (Triassic). This rock is soft and thickly bedded; it is not met with in the cairn structure or in the varied lithology of the thrust-blocks. The slabs were all lying flat or slightly tilted either on or a little below the natural surface of the ground; they are shown on pl. XLIV, 1 and 2. The rock outcrops near Coity—about half a mile away from the cairn to the north[1] (fig. 2, p. 131).

Slab D. This slab measured 3 ft. 6 in. in greatest length; under it was 2 to 3 in. of soil overlying undisturbed Lias clay. The former contained no artifacts.

Slab E. This measured 2 ft. 3 in. in greatest length, and was about 9 in. thick. It was surrounded by packing stones, and lay with its upper surface 6 in. below the natural ground level. On removal, it was found to cover a deep hole which reached the underlying Lias, the beds of which were weathered along bedding planes and joint planes, and so gave rise to closely packed nodular masses,[2] which could easily be dislodged. The total depth of the hole was 1 ft. 9½ in. below original ground level—see pls. XLIV, XLV, 2, and L, section. It was filled with clayey soil, in which were specks of charcoal, and one sliver of burnt bone was noted.

Slab F. This large slab (4 ft. 3 in. by 3 ft. 2 in., and 9 to 10 in. thick) lay partly over the thrust-block IV (pl. XLIV, 2). It was placed with its bottom 3 to 4, or more, inches below original ground level, and with its northern sides pressed up against a face of undisturbed clay; packing stones were pressed round its southern aspects. Under it, in general, was a thin layer of loamy earth containing occasional flecks of charcoal overlying undisturbed clay: under the east point of the block, flanking slab E, was a deposit of black earth, sloping down to the hole already described (pl. L, section). A sample was sent to Mr. A. S. Kennard, in the hope that it might contain land shells; but he reports that only minute fragments of fossil shell (evidently from the Lias) were present.

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[1] For these points, and for the identifications, see Appendix V by Dr. F. J. North.

[2] Dr. F. J. North's description.

Slab G. This massive slab (2 ft. 10 in. in greatest diameter, and 10 to 12 in. thick) had packing stones carefully placed round it. The top was level with the original ground—10 in. below the present surface. It was found to cover an oval basin-shaped smooth-sided hole made in the clay. The upper part of the hole was filled with angular slivers of sandstone (loosely permeated with earth, probably intruded subsequent to deposit). Deeper down, clayey soil made its appearance between the slivers, and the lowest part of the hole contained only re-deposited clay (pl. L, section). A minute fragment of oak (?) charcoal from the hole was identified by Mr. Hyde.

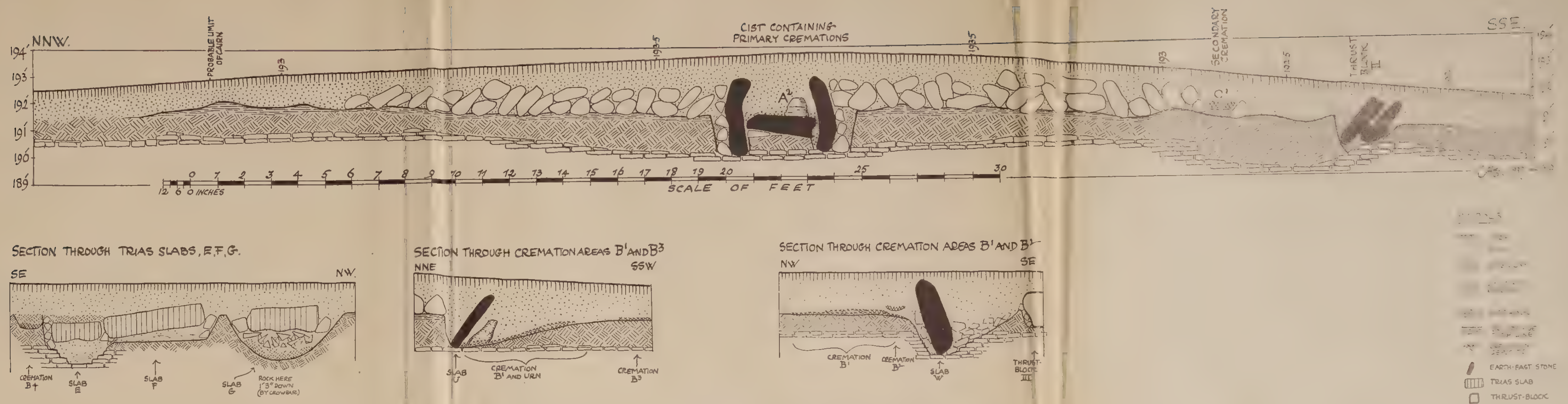
When it is recalled that only one sliver of apparently freshly broken stone had been met with elsewhere in the cairn—the wedge under the floorstone of the cist—the unusual character of this deposit will be apparent.

To summarize: Three of the four slabs were in carefully prepared positions, and had packing stones round them; they were therefore in their original positions (the fourth, slab D, is doubtful). Two covered deep artificial holes dug, and refilled, for some purpose unknown to us; one partly covered a thrust block, and was later than it, and therefore later than the cairn. None contained any datable artifact. It may be suggested that the pits were ritual pits the deposits in which contained perishable elements, and that they were connected with the secondary cremations.

The Lithology of Simondston Cairn. The result of Dr. North's examination of the material of the cairn is illustrated graphically on fig. 2, and described in detail in Appendix V. Most of the material, he says, is sandstone of Rhaetic age, 'the outcrop of which approaches to within 250 yards of the site on the east'.

The thin slabs (of red Triassic conglomerate) needed to distribute the pressure under the thrust-blocks were in several cases collected from a site half-a-mile to the north-north-east adjacent to Coity village; from the same source came the large, thick slabs of red conglomeratic marl marked D, E, F, and G on the plan. A few specimens of grey Triassic conglomerate were found in the cairn; 'this rock', says Dr. North, 'outcrops about 500 yds. east-north-east of the site'.

Thus all the stones used by the builders of the cairn and by those who buried their dead on its margins, came from the east side of a north to south line drawn through the cairn; and the inference is that they all, generation after generation, lived on this side of the saddle. It is probable enough; for the little


NNW.
SSE.
194'
193'
192'
191'
190'
189'
PROBABLE LIMIT OF CAIRN
193
193·5
CIST CONTAINING PRIMARY CREMATIONS
A^2
193·5
193
SECONDARY CREMATION
192·5
THRUST BLOCK II
C^1
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 25 30
12 6 0 INCHES
SCALE OF FEET
SECTION THROUGH TRIAS SLABS, E, F, G.
SE
NW.
CREMATION B4
SLAB E
SLAB F
SLAB G
ROCK HERE 1'3" DOWN (BY CROWBAR)
SECTION THROUGH CREMATION AREAS B^1 AND B^3
NNE
SSW
SLAB U
CREMATION B^1 AND URN
CREMATION B^3
SECTION THROUGH CREMATION AREAS B^1 AND B^2
NW
SE
CREMATION B^1
CREMATION B^2
SLAB W
THRUST-BLOCK III
EARTH-FAST STONE
TRIAS SLAB
THRUST-BLOCK

Simondston Cairn: the main section, S–S^1, and three minor sections; on double the scale of plan (pl. xlix)

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valley had been occupied in neolithic times, as the megalithic burial chamber at its head, known as Coed Parc Garw, indicates: see fig. 1, p. 130.

At the outset of the investigation it was noticed that the conformation of the saddle was such that the mound placed on its crest was visible from a considerable distance on the east side, but only from a short distance on the west side. Dr. North's lithological studies have thus provided the first approach to proof of a visual relation between settlement and burial-place in the Bronze Age, a relation which is often assumed to exist without proof.

Summary. Simondston Cairn was constructed in a Lias limestone region by folk who had settled on a tributary of the Ewenny river to the east of the burial-place. The primary deposits consisted of the cremated remains of two adults and a child in 'developed' food-vessels, associated with two flint artifacts and a natural cup-shaped object. These came from the Chalk, the nearest outcrop of which is in Wiltshire and Dorset. The deposits were in a well-constructed stone cist, one stone of which had a series of pecked cup-marks and was in part artificially shaped. Such cup-marks are widely distributed in the highland zone of Britain, but their occurrence as part of a Bronze Age cist appears to be rare. This is the first record for Wales.

The date of these deposits, judging from the pottery, is probably Middle Bronze Age A, about 1500 B.C.[1]

The cairn surrounding the cist was 43 ft. in diameter and of straightforward construction; great attention was paid to stability as is shown by the earthfast buttresses on the lower (southern) side.

At a later date in Middle Bronze Age A, the southern margin of the cairn was used as a cemetery by a folk who also cremated their dead. Their burial rites represented a different tradition. We may note the free scattering of charcoal; the neglect of, or indifference to, sound constructional methods in the use of earth-fast stones; the digging of pits and holes in the area set aside for burial,[2] and their sealing with large slabs of coloured stone. The most important of these secondary interments was associated with a collared urn of fairly early type (Abercromby type I, phase i) which, on the conventional dating, was made about 1450 B.C. Coal—transported—was used as a fuel in the pyre of this burial; the earliest record for Wales.

Mr. Hyde records the presence in the charcoal associated with the burials of ash, hazel, oak, and mountain ash.

[1] Using the terminology and chronology adopted by the Organizing Committee of the First International Congress of Prehistoric and Protohistoric Sciences, *Handbook*, 1932, p. 32 (M. B. A. = 1700–1400 B.C.).

[2] Such occur freely in neolithic long barrows (*Proc. Prehist. Soc.*, 1937, p. 174): many are recorded by Greenwell in round barrows on the Yorkshire wolds, in words which might have been used for the Simondston examples (*British Barrows*, p. 9).

II. Pond Cairn

The second mound at Coity, though correctly described (p. 129) as being in a hollow in relation to the major topographical features, is actually on a slight hummock in the pasture fields extending westwards towards the rivulet which runs into the Ogwr. This is seen in the panorama, pl. LII, where the fall of the ground to the south (beyond the black cow) is apparent. Brackla Hill forms the greater part of the skyline (D); the position of Simondston cairn is marked by the letter C.

The Lias rock is in the neighbourhood of the mound close below the surface, and two shallow quarries probably of medieval date lie within a stone's throw. One of these (marked on fig. 2) has now become a pond and we have given its name to the cairn, as being the only identifiable feature in the immediate neighbourhood.

The appearance of the mound is shown in pl. LI, 1. It was much better preserved than the Simondston cairn, being about 3 ft. above natural ground level at the centre, and it gave promise of being undisturbed save by the plough. A rectangle of sufficient size was surveyed and pegged, providing a grid set true north and south with 5 ft. squares.

Excavation began on 1st August, and took five weeks to complete, exclusive of filling-in; three men were employed.

It was considered desirable to locate the primary burial or burials as soon as possible after the opening of the mound to avoid the risk of interference by intruders. A north to south line was therefore taken to include the highest point of the mound (line A—A′ on plan, pl. LXV), and a section trench cut.

The structure and stratification exposed in this trench were as follows. At both its north and south ends, beneath a layer of top soil 4 to 15 in. in thickness, a mass of stones was encountered. As the centre was approached the stony mass was replaced by a deposit of loamy soil. Farther in, the soil became more coloured and compact. Underlying all, as at Simondston, was the original Lias clay subsoil overlying Lias rock (pl. LXV, section). Evidently we were cutting into an earthen mound surrounded by a ring of stones.

From the trench, subsequent to the examination of the central deposits, the mound was cleared outwards (westwards). This was the first stage in the work, and its completion is illustrated in pl. LII. Thereafter, such portions of the second half of the mound, the eastern, were cleared as was needed to ensure that all the facts bearing on the meaning and the history of the structure were obtained.[1]

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[1] Since the reader can hardly fail to notice differences between the technique of the work carried out here and that at Simondston, I may be permitted to mention that while Simondston was a 'rush

The Central Stone-heap and Urn Burial. When the approximate centre was reached, a small pile of stones was disclosed, the apex of which was 9 in. below the surface. This central stone-heap was roughly circular, some 5 ft. in diameter, and 2 ft. 3 in. high (pl. LIV, 1). It consisted of blocks of Rhaetic sandstone,[1] the largest 2 ft. in diameter, piled up round a central space some 16 by 16 in. in area. Some stones had collapsed into this space, and the upper part was filled with fine earth like the interstices of the rest of the heap. There was here a thin slab of red Triassic conglomerate, tilted sideways, 14 in. in greatest length.[2] From the earth of the central space, from the more clayey loam near the floor, and from the spaces between adjacent stones, much burnt bone and fragments of a cinerary urn were recovered. The largest surviving portions of the urn were at the bottom, and one basal angle was in position showing that the cinerary had been placed upright on an earth floor. All the fragments were as soft as the soil which enveloped them, and were difficult to recover. Treatment at the museum showed that the urn was of overhanging-rim type with broad collar and well-marked shoulder, originally over 14 in. high (pl. LXIV).[3]

This urn was typologically more advanced than that deposited as a secondary at Simondston; its character is that of Abercromby's type I, phase ii, and the cairn was therefore built, on the conventional dating, in Middle Bronze Age B (1400–1000 B.C.).

The bones were those of one adult, in Mr. L. F. Cowley's opinion (Appendix II, p. 171). The weight of the material recovered was 4½ lb.

The 'Basin'. When the stones of the heap were removed a circular black discoloration was noted on the east side of the urn. This was found to be the charcoal-lined wall of a shallow basin cut in the clay floor. The charcoal was in the form of long sticks laid more or less vertically downwards to form a lining to the hollow, and there was a well-defined extension to the north-east in which the sticks were laid horizontally. Mr. H. A. Hyde examined this charcoal; it was wholly oak.[4] Inside the layer of charcoal was a zone of red or pink clay (coloured doubtless by the action of hot charcoal), and within that again a centre of greyish-yellow clay.

Pl. LIV, 2, shows the basin when cleared down to the red clay, the charcoal

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job' carried out at a time unsuitable for field work, and when the writer had other pressing duties, the Pond cairn was examined under conditions the best possible in every respect.

[1] This and later references to the lithology of Pond cairn are based on Dr. F. J. North's survey. See Appendix V and fig. 2.

[2] This slab must have been brought from the north-east of Coity village. See fig. 2, and Appendix, p. 180.

[3] Description in Appendix I.

[4] Mr. Hyde's valuable report on this and other charcoals at Pond cairn will be found in Appendix IV.

here and there exposed. On cutting a section through it, the floor was found to consist of no less than 5 in. of solid charcoal 'paste' resting on the Lias rock (see section, pl. LXVI). On examination in the museum burnt bone and one animal tooth were found to be incorporated in this charcoal paste. Mr. L. F. Cowley reports that portions of human teeth and digits were recognizable. The small quantity of material (3 oz.) does not permit certainty, but since nothing identified in the urn burial is duplicated here, it is probable that the burnt bone of the basin comes from the funeral pyre. The animal tooth was a portion of a molar of sheep (or goat). (See Appendix II.)

In considering the significance and function of this basin, regard must be paid to the fact that while the floor-stones of the stone-heap on the west side of the urn were carefully pressed into the clay floor (three are shown in pl. LIV, 2), those on the east side, and over the basin, lay haphazard on the surface; that is, the former were placed in position before the deposition of the urn. The person officiating, then, at whatever ceremony the basin indicates, stood on the east side of the urn, facing west. The plan with the projection[1] (pl. LXVI) is certainly singular; there was no doubt in my mind when removing the charcoal that it was intentional.

Extending outwards and northwards from the basin was a layer of reddened clay overlaid by a thin layer of charcoal. Only heat could have produced this appearance, but the area was not large enough, nor the intensity of reddening sufficient, to suggest that it was the site of the pyre. Two areas covered with a thin layer of charcoal trodden into the floor were also found, partly under the stone-heap, and extending outwards; they are planned on pl. LXVI.

The Central Pit. Evidence of disturbance having been noticed in the neighbourhood of the stone-heap, the trench already made was deepened down to the Lias rock. On the south side the clay subsoil was found to have been relaid to a depth of 7 to 10 in., covering a pit cut in the rock. When the clay was completely cleared away (pl. LV, 1) it was seen that a number of large sandstone pebbles had been tossed into the hole, and that small fragments of Lias rock, almost certainly those quarried from the hole itself, were disposed around them. The stone filling was the same down to the bottom. Fine loamy earth occupied the interstices of the upper layers; this got more loamy, even clayey, as the clearance progressed, exactly as in the stone-filled pit under Trias slab G at Simondston (p. 140). Near the top there was an animal bone 3 in. in length pointing downwards between the stones. Mr. L. F. Cowley reports that it is probably a portion of the metatarsal of a red deer (Appendix II). At the same level tiny fragments of burnt bone were noted; these became more numerous as one got

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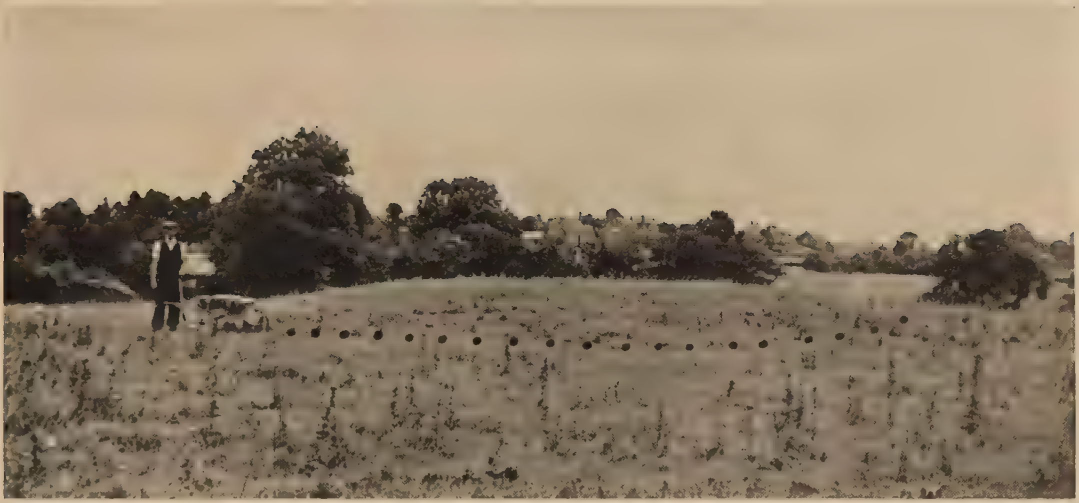
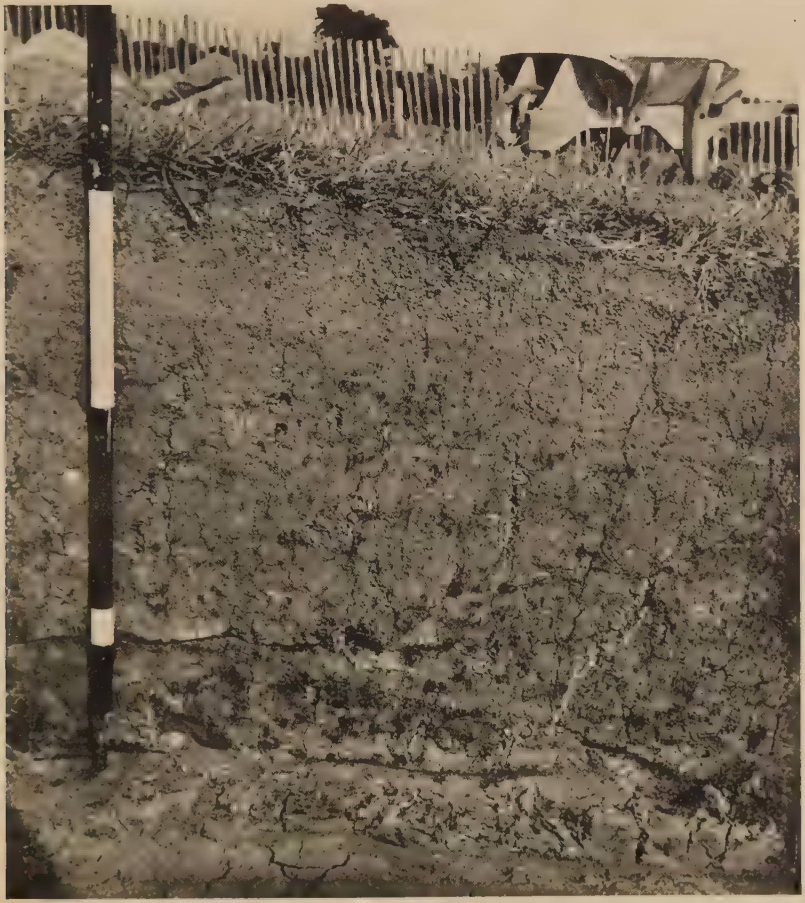
[1] If it is permissible to compare small things with great, the plan of Bryn yr hen Bobl may be cited. See *Arch.*, lxxxv, 1936, p. 256, and Mr. Hemp's comments, pp. 274–5.



1. Pond Cairn: the low mound (3 ft. high) in a neglected pasture



2. Pond Cairn: the face of the cut along the centre line, N.–S., on the S. side of the urn-burial, showing the structure of the turf stack

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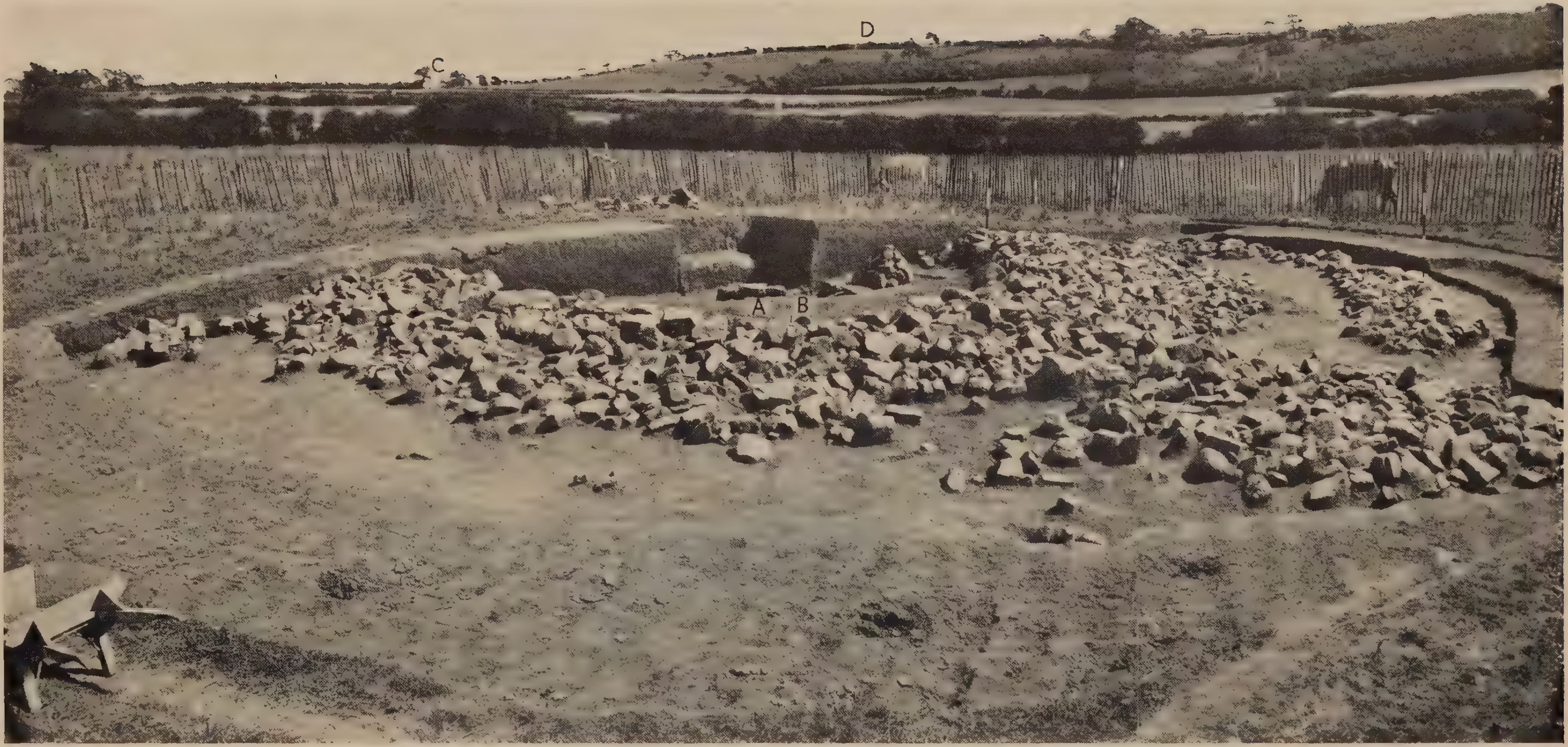

Pond Cairn, western half cleared: from NW. The site of the central stone-heap (A) and of the pit (B) are shown. Note the post-Roman accumulation of earth on the cairn-ring. Brackla Hill (D) and the saddle on which Simondston Cairn (C) is sited, in distance

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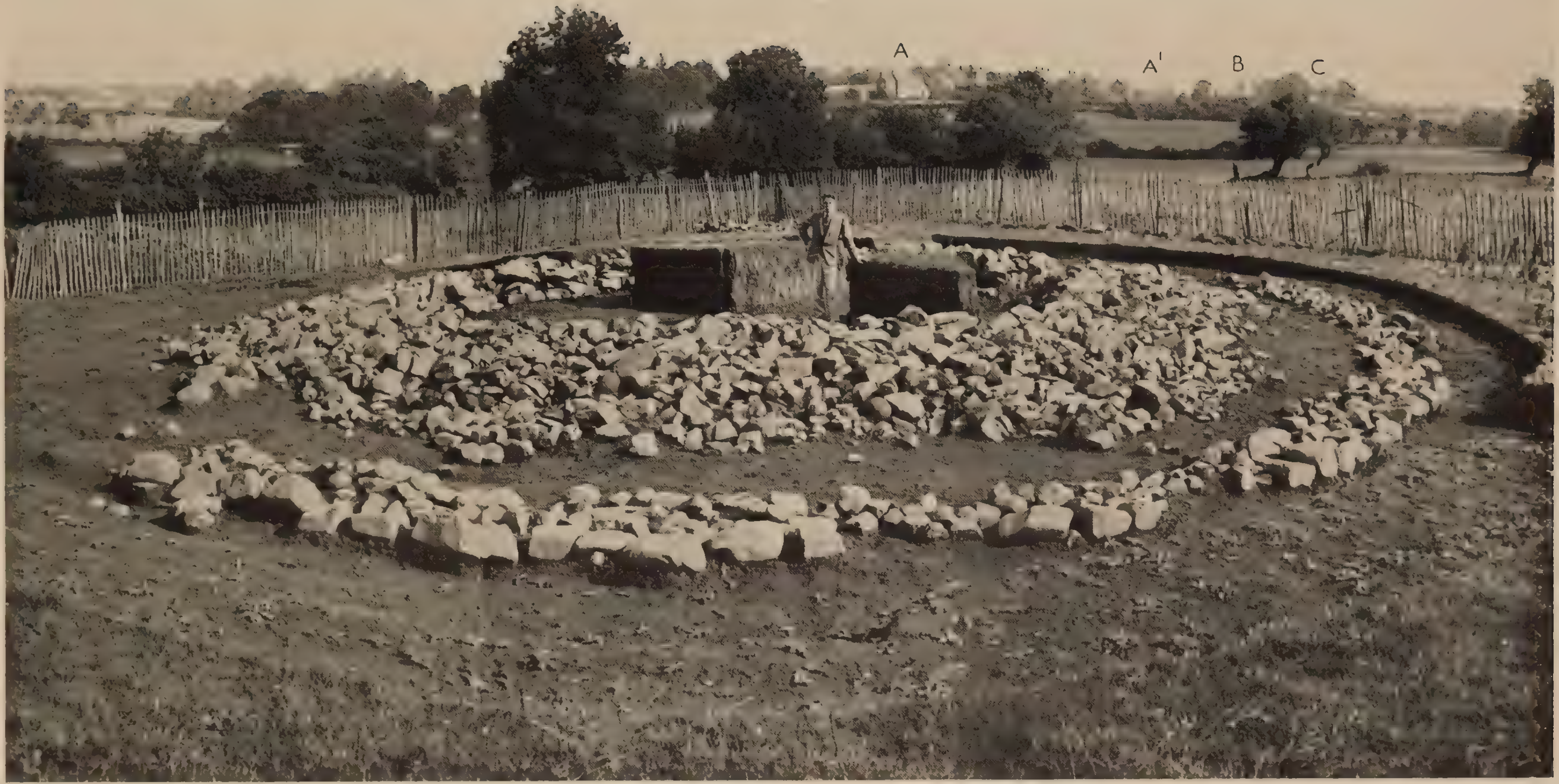

Pond Cairn from SW., showing excavation work completed. Two 'islands' of the turf stack remain in centre. Coity village (A-A¹), church and castle (B, C) in distance

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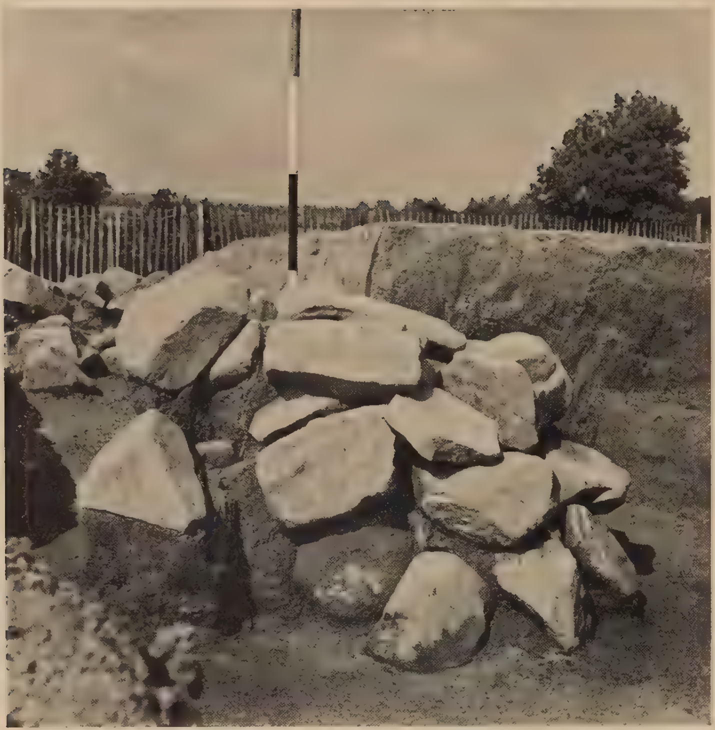
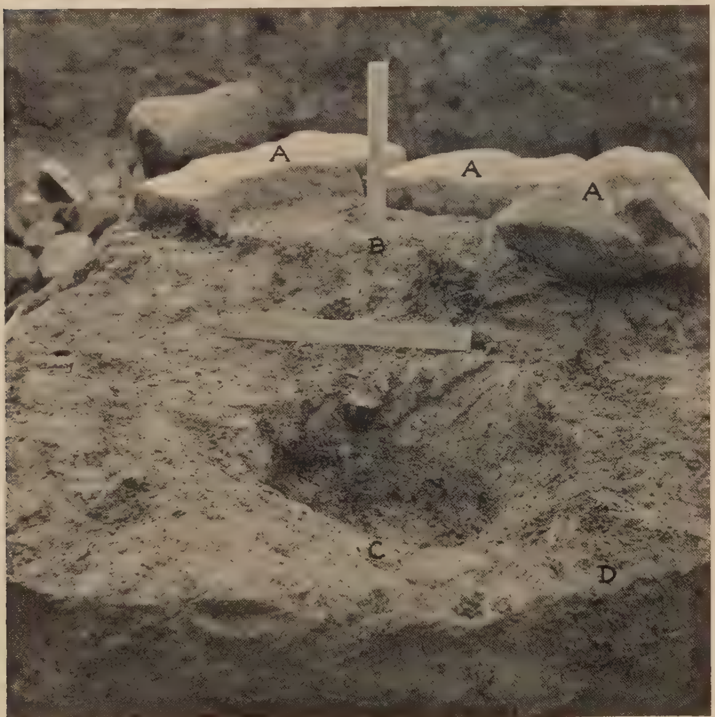


1. Pond Cairn: the central stone-heap, covering the urn-burial; one outer stone is seen to rest on earth—part of the surrounding turf stack



2. Pond Cairn: site of urn (B) with (AA) stones set around it. The basin in front (C) is cleared of its filling of clay, but the charcoal has not yet been exposed at (D)

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lower, and tended to be concentrated in one part of the pit, but nowhere showed any sign of careful deposition. The total quantity of burnt bone was 1½ lb. Mr. Cowley gives reasons for believing it to represent the remains of a child of under seven years (Appendix II). On the floor of the pit was a flint flake—a fresh spall of good material, unburnt.

The pit measured 4 by 4 ft. at ground level, 3 ft. 5 in. by 3 ft. on the floor, and was 15 in. deep. (See pl. LV, 2, and the plan and section, pl. LXVI.) It lay in part beneath the stone-heap, and clearly antedated the urn-burial. Its contents —a scatter of burnt bones—preclude the idea that it is the primary burial for which the cairn was raised; rather, it would seem to represent something in the nature of a dedication, a sacring, of the site.

The Turf-stack. We may now turn to the earth-mound enveloping the stone-heap. From within a foot of the surface down to the original ground level it presented peculiar features. It was free from stones and very variegated, orange-black (iron-stained) stripes and layers contrasting with grey-blue clayey patches (showing occasional scraps of shell from the Lias), and with yellowish soil and dark earth; there was an occasional flake of charcoal. The pattern of colour was irregular, almost fantastic, a feature which pl. LXVI attempts to reproduce symbolically, since the photographs do not bring it out.

Every observer on seeing it said 'Turf!' And there can be no doubt that this is its nature (pl. LI, 2), and that it was derived from a moorish or peaty site. The grey-blue clay formed, we may suppose, the underside of thick turves. At a variable distance above the natural ground level a continuous and sinuous orange-and-black layer, harder, thicker, and grittier than elsewhere, was seen. The patches of clay seem not to be present below this deposit.

Analyses[1] of the material from immediately above and below this ferruginous layer indicate that the whole was of common origin; that the slightly higher content of iron, and especially of ferric iron, in the lower layers was due to local segregation of ferruginous material *in situ*, and that the ferruginous layer is to be regarded as incipient iron-pan.

The difference between the earthy material of the mound and the present soil of the immediate vicinity may be accounted for, in Dr. F. J. North's opinion, by supposing that damper and more acid soil conditions formerly prevailed. A small affluent of the Ogmore river traverses the area, and even after centuries of human occupation there are ponds in the vicinity which indicate that the drainage is to some extent impeded. Such areas could readily have yielded turf of this moorish, peaty character.

Some of the outer stones of the central stone-heap appeared to rest on the turf structure (pl. LIV, 1, left). This suggests that stone-heap and turf-mound were erected contemporaneously, the stones settling down into the surrounding turves as they were being piled up.

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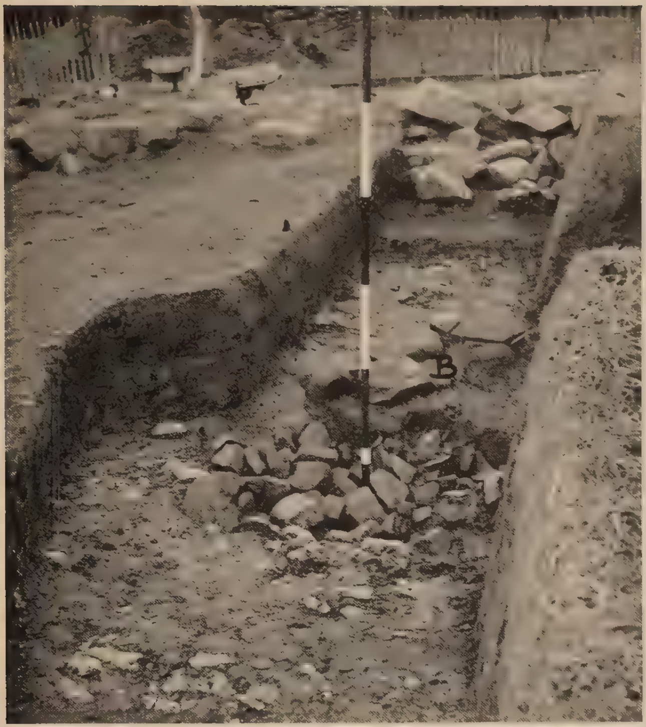
[1] Very kindly made by Dr. C. A. Seyler, F.I.C.

The variegated colouring of the turf-mound faded out into the surrounding brown loamy soil, but the margins were vertical, even overhanging. We are, then, justified in speaking not of a turf-mound but of a turf-stack.

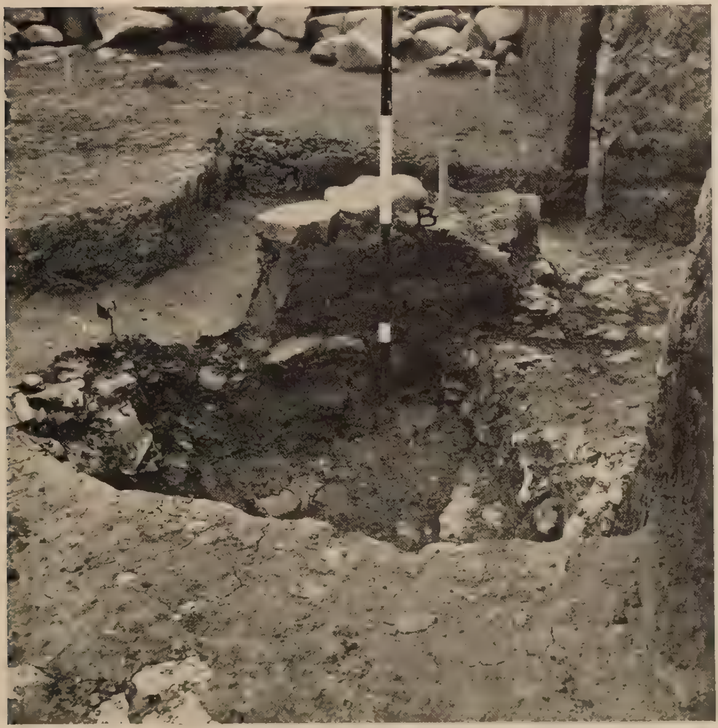
The Cairn ring: inner face. The loamy deposit referred to in the previous paragraph cannot be explained except in relation to the outer stone structure which impinged on it; we will therefore next consider this structure, massive enough to justify, in spite of the central turf-stack, the description of the monument as a cairn.

Clearance of the western half of the mound, then, disclosed a mass of stones forming a semicircle round the turf-stack. This mass was about 2 ft. in height on the inner edge, but towards the outer margins it thinned out to scattered and single stones. These features are shown in the panorama (pl. LII) taken from the north-west and in the photograph of the semicircle from inside (pl. LVI, 1). At one or two points on the inner curve there were indications of a wall face; clearance quickly demonstrated that there was a continuous dry wall, from which, when it was higher than it is now, much stone had fallen, forming a talus at its foot. Pl. LVI, 2 shows this south-west quadrant of what we may now call the cairn ring, partly cleared; the material removed is piled up on the left of the picture. The weight and mass of fallen stones is illustrated in pl. LVIII, 1, taken on the north side of the ring; the same area, cleared, is shown in pl. LVII, 2. The dry-wall construction was of varied character, and for the most part of poor quality. Almost everywhere throughout the circuit there was, however, a well-laid foundation course of stones, carefully chosen for their squareness. The wall is sometimes built up on these sills (three or four courses of stones being still standing in places); big boulders may be placed on the sill, or set upright behind the sill; sometimes the wall-face is recessed in steps from the sill upwards. Sometimes the sill is omitted, a large boulder being placed on the sill-line. All these features are shown in pl. LVII, 1, taken on the north side of the ring; four courses of walling are present on the extreme left of the picture. Rarely, as in this plate, a stone is set on end. In such a case no attempt is made to fix it firmly in the earth. Examination having been made of all doubtful cases, and two sections cut through the ring, it can safely be asserted that there is no earth-fast stone in Pond Cairn.

Occasionally, a very large boulder is used, and is bedded with an outward slant, as in the section, pl. LXVI. Occasionally again, the inner wall-face is so badly built of small stones that only the well-constructed portions adjoining enable one to be certain of the line. Much of the apparent inadequacy of the walling is however due to the instability of the structure as a whole. The wall, with



1. Pond Cairn: trench cut to rock-level disclosing a rock-cut pit filled with stones, beside and below the urn-burial (B)



2. The pit, which contained burnt bones, completely cleared. The original ground level (B) shows that the pit was excavated through both clay and rock

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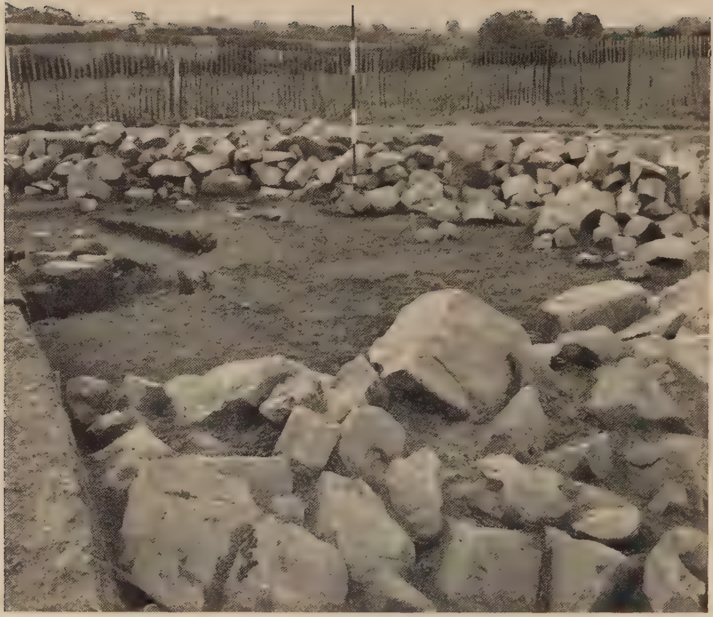
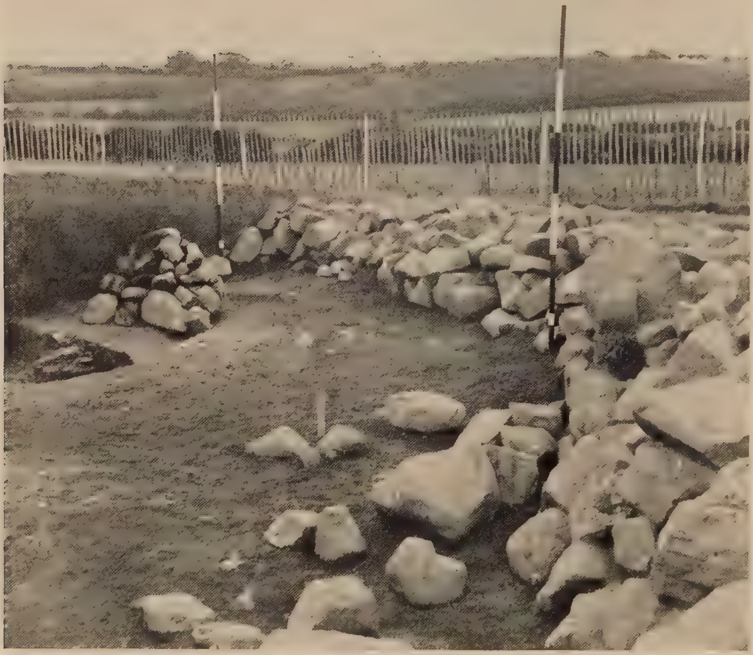


1. Pond Cairn: the cairn-ring—one-half cleared—from the N. The site of the urn-burial in the centre of the ring, is to the left. At this stage the cairn-ring appeared to be a formless heap of stones



2. The SW. quadrant of the ring, in part cleared of fallen stones, showing original wall-face. The fallen stones are piled up on the left

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rare exceptions, is ill-designed to resist the inward thrust of the cairn mass, which was found on section to be completely structureless, merely a pile of stones; the thrust must therefore have been considerable. Many of the surviving stones of the wall-face are pushed forward for distances up to a foot, and precariously balanced. The 'upright' stone by the footrule in pl. LVII, 1 is 20° out of plumb.

The Interspace. It will be recalled that the outer margins of the turf-stack faded out into loamy soil. The talus of fallen stones in front of the wall-face of the ring was enveloped in this soil (pl. LXVI), which was full of flakes and flecks of charcoal, especially near the turf-stack.

The original ground level below the loamy soil was found to be covered with charcoal; it was hard, as though heavily trodden. The charcoal was in places a thin skin, in places a thicker deposit; sometimes (on the south-west side of the ring) it formed a gritty black mass fully an inch in depth,[1] in certain places on the north-west side the ground in which it was imbedded was slightly reddened, as though the charcoal had been scattered when hot.

The margins of this charcoal layer were definite. On the inner side it ended at the turf-stack, on the outer side it extended right up to the wall-face of the cairn ring at all points; indeed, flakes of charcoal were found here and there on the stones of the wall and in the spaces between the sill-stones as though it had been tossed in showers on to the ground. The charcoaled floor, moreover, in many places rose up in a curve to reach the wall: not much, half an inch to an inch, but sufficient to be noticeable (see section, pl. LXVI, south side). The layer did not extend under the wall; the fact recorded above was sufficient to prove this, and it was confirmed in the two places where the cairn ring was removed.

One must conclude from these facts that a narrow circular interspace or passage way—it was from 3 to 6 ft. in breadth—was left between the turf-stack and the cairn ring; that a certain amount of dust and soil (from the stack?) blew on to this floor and settled against the sill stones of the wall, before the charcoal was scattered on it and trodden in by some ceremonial movement of men.

It was difficult to find in this charcoal layer pieces sufficiently large for examination, but Mr. Hyde was able to identify in the sample submitted to him oak (chiefly), hawthorn, and hazel (Appendix IV).

The lowest stones of the talus of the ring rested on the charcoaled floor of the interspace, showing that the collapse of the structure started soon after the deposit; in pl. LVIII, 2, three stones have been turned over to show the charcoal staining their undersides (the wall face, here of three courses, is shown on the left of the footrule).

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[1] Dr. North examined this charcoal; no coal was present in it.

The talus nowhere extended under the turf-stack. The fact confirms the sequence of construction here suggested. The limits of the stack in relation to talus at one point are shown in the *foreground* of pl. LVI, 2, by white pegs; here no stone of the talus has been touched by the workmen.

We are now in a position to interpret the loamy deposit which envelops the talus and fills the interspace. The view that it is a natural silting, derived from the high wall-sided turf-stack after the ceremonies were completed and the cairn deserted, has everything to commend it. Decay, naturally, began immediately thereafter; the inner wall face of the cairn ring was pressed forward by the weight of the structure, and its upper stones fell on to the floor; more slowly the turf-stack disintegrated, its outline changing from that of a squat gasometer to a dome. A difficulty in this interpretation led to an extended, but I think reasonable, conception of the charcoal ceremony. The difficulty was this: if the loam filling were the result of natural processes, why and whence the heavy load of charcoal it carried? Clearly, charcoal and plenty of it was in the forefront of the orders for the day; it would have been scattered as freely on the top of the turf-stack as on the floor—the top was indeed the obvious and only point of vantage for the leaders. And as the charcoal-smeared and well-trodden top decayed, the (finely comminuted) charcoal would be thickest in the silting exactly where it was found, nearest the stack and nearest the bottom.[1]

The Cairn Ring: outer edge. The circularity of the inner face of the cairn ring and its diameter (p. 154) having been determined, attention was directed to its outer edge. Further clearance showed that the external irregularity seen in pl. LII was due to stone-robbing at a comparatively recent date. The whole of the outer part of the cairn ring had been removed for a quarter of its circuit, and an intermediate zone had been removed round the rest of the structure. Much of the material thus collected remained on the site in a heap shown on the right edge of pl. LII.

The clearance brought to light the original kerbstones of the cairn ring, large stones laid to present plane faces outwards (see pl. LIX, 1). On the north-east side two courses were found in position, showing that these kerbs were really the base stones of the outer facing of the ring (pl. LIX, 2). Some of the upper stones oversail the lower and were obviously pushed forward by the pressure of the cairn mass; but two or three (to the right of the staff in the plate) seem to be in their original position. These show a pronounced batter, even a curved face; and this suggests that the whole external surface of the cairn ring was originally composed of stones chosen to present, whether on top or sides, as smooth an appearance as possible; looked at from a vantage point it would, I think, have seemed a three-dimensional, coarse, mortarless mosaic. The Ring then was, in essence, a rubble core with stone facing. This is illustrated diagrammatically in the reconstruction, fig. 6, p. 155.

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[1] These conclusions were arrived at in the course of a discussion on the spot with Dr. R. E. M. Wheeler and Professor Forde, to whom I am much indebted. There is a possible parallel in Devon. A barrow at Halwill, Burrow Park Tolly, showed 'a band of fibrous wood-charcoal 7 ft. long and 3–4 in. thick covering apparently the whole of the summit of the mound' (*Devon Association Transactions*, 1896, pp. 86–9).

It is relevant to mention that at the point on the rim of the cairn where the outer facing survived there was a spill-over of stones (removed before the photograph was taken). The talus thus formed had preserved the wall.

The care which seems to have been taken over the *surfaces* of the cairn ring made the casual deposition of its mass very noticeable. Its haphazard appearance is well shown in pl. LIX, 1. Sections of the mass showed that while the stones were closely packed, there was no attempt at dealing with the dynamics of the problem. Obviously it was no use leaning the stones inwards as at Simondston; this would have made the inner wall more insecure even than it proved to be. But since these Middle Bronze Age folk had given up the ancient and well-proven notion of opposing thrusts by the inertia of earth-fast slabs, their only line of action was careful dry-stone walling throughout, and this was obviously too laborious and difficult.

The Lithology of the Cairn Ring. The material used by the builders of the cairn ring, Dr. F. J. North reports, 'contrasted strongly with that used in the Simondston Cairn, in that, whereas in the latter quarried blocks were used, the stones of the Pond Cairn were surface gatherings'. This accounts for the stones being more varied in size and character than at Simondston (see Appendix V). The source of the Rhaetic sandstone of which the cairn is mainly composed, as determined by Dr. North, is shown on fig. 2; it is different from the Simondston source.

The East Stone-heap and Pit. There was one interruption in the symmetry of the cairn ring, a stone-heap projecting inwards on the east side of the monument (pl. LX, 1). At one point it completely blocked the interspace, and was higher than the existing portions of the ring (pl. LX, 2). On investigation it was found to be composed of similar material to that of the cairn ring with some Lias nodules in addition.[1] The western angle where it touched the turf-stack was vertical, built of sandstone and Lias slabs selected for their squareness, but its remaining edges were not so carefully defined. Over one foot of laid stone had been removed from the western angle when pl. LX, 1 was taken.

In clearing, it was found that the bottom stones in the centre of the heap had partly sunk into a grey-black greasy mass filling a shallow oval pit, to cover which the stone-heap had been raised. The pit was basin-shaped, 6 by 3 ft. in area and 10 in. in depth, dug into the clay subsoil.[1] Its eastern edge cuts into the inner wall of the cairn ring, the line of sill-stones being interrupted. One sill was undercut when the pit was made (pl. LXI, 1, right-hand side) but remained firmly fixed in its original position. The pit then was a later construction than the cairn ring; but since the turf-stack—an unstable structure—was still vertical-sided when the stone-heap was erected over the pit, the lapse of time may be regarded as insignificant. On the bottom of the pit sticks of charcoaled wood were seen to be pressed into the clay, which was reddened in places—the bottom was soft and had not been trampled on. The central area of the pit everywhere contained the greasy mass already referred to; at the sides this mass became more earthy, until it reached the clay wall. In general, it contained carbonized wood (a few large sticks at the top and the east end, but mainly twigs and roots) and bits of reddened clay: a quantity of grains was also noted on the surface of the mass by my wife. There was no bone, human or animal, burnt or unburnt. In the centre of the mass, lying flat, was a thin slab of grey shelly Liassic limestone, 12½ in. in length,[2] from a site on the slope of Brackla Hill (see fig. 5, section).

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[1] Dr. North reports: 'Lias of peculiar littoral type—of local origin.'

Some of the top layer of grey-black material and a sample of the grains extracted therefrom were sent to Professor John Percival, whose report is printed in Appendix III.

In both he found wheat, probably bread wheat (*Triticum vulgare*) or possibly club wheat (*T. compactum*) with numerous caryopses or grains of cheat or chess (*Bromus*), a common weed, he remarks, of cereal crops, abundant in ancient times, as now, in some places. There were also a few grains of barley, see pl. LXIII, 2, series *a*, *b*, and *c*. In his view the cereals were deposited unburnt in the pit, but my colleague Mr. H. A. Hyde considers that the carbonization of the wheat grains from the pit was due to heat and not to slow spontaneous chemical change. (See Appendix III.)

The amount of carbonized wood in the mass, sticks and twigs of appreciable size, was considerable. Much was picked out and submitted, together with a general sample of the material, to Mr. Hyde. His analysis will be found in Appendix IV; in sum, he identifies no less than eight species. The list in order of determinations is gorse (38), hazel (9), oak (6), hawthorn (4), bracken (3), mountain ash (1). The ecological significance of this most interesting list will be considered later (p. 165).

A sample of the grey-black material was also submitted to a chemist, Dr. C. A. Seyler, F.I.C., with a view to determining whether it was decayed vegetable matter or no. He was kind enough to examine it, but found that there was too much soil in the sample for an interpretation. He suggested a

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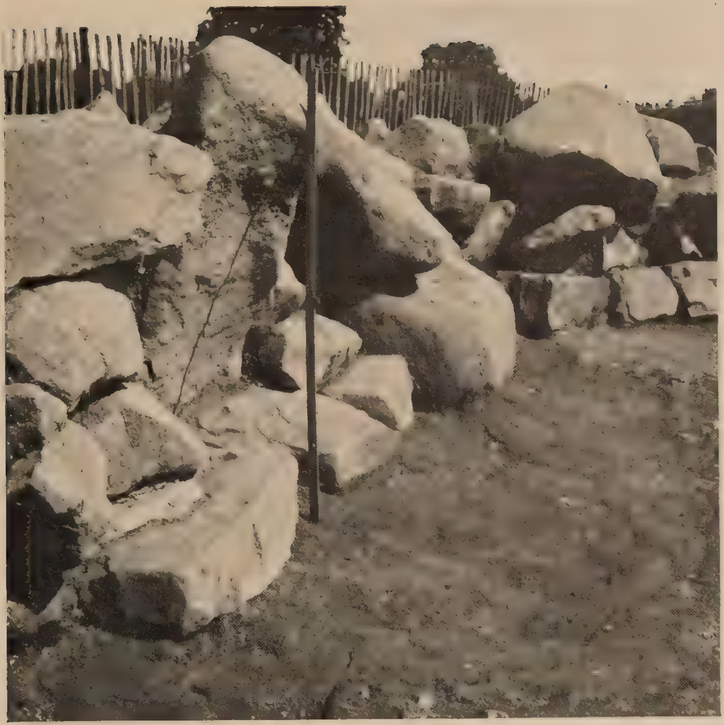
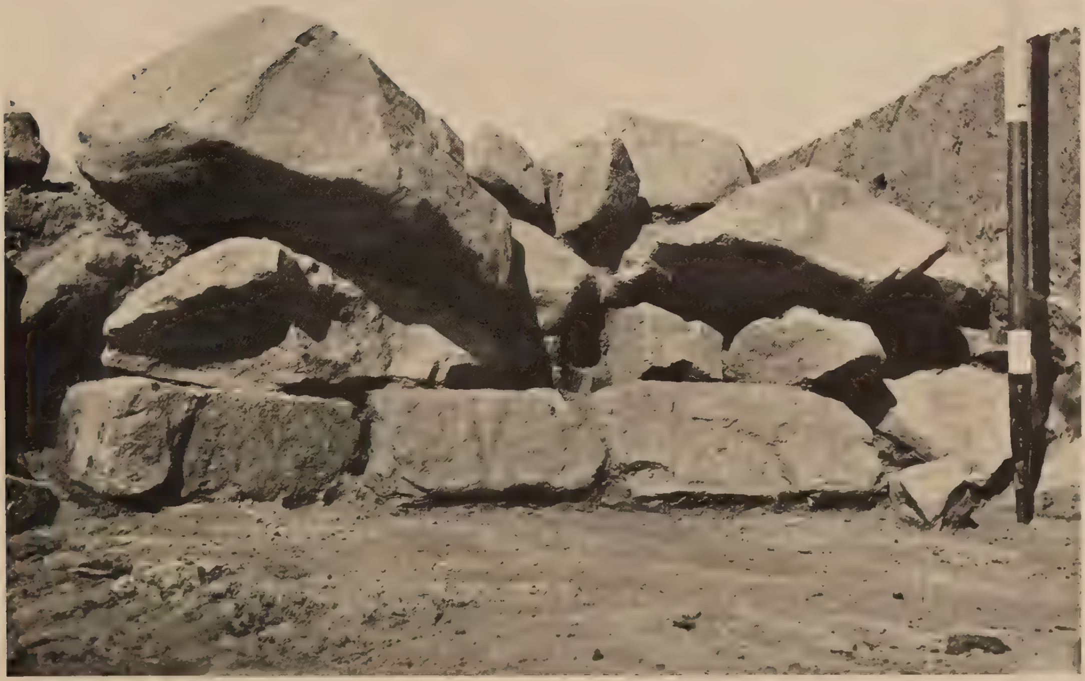
[1] The Lias rock was proven here at 1 ft. 3 in. below original ground level.

[2] See Appendix V.



1. Pond Cairn: the N. side of the ring cleared—showing sill-stones and (on the left) four courses of dry walling



2. A 'close-up' photograph of the same area as Plate LVIII, 1, cleared: showing well laid sill-stones

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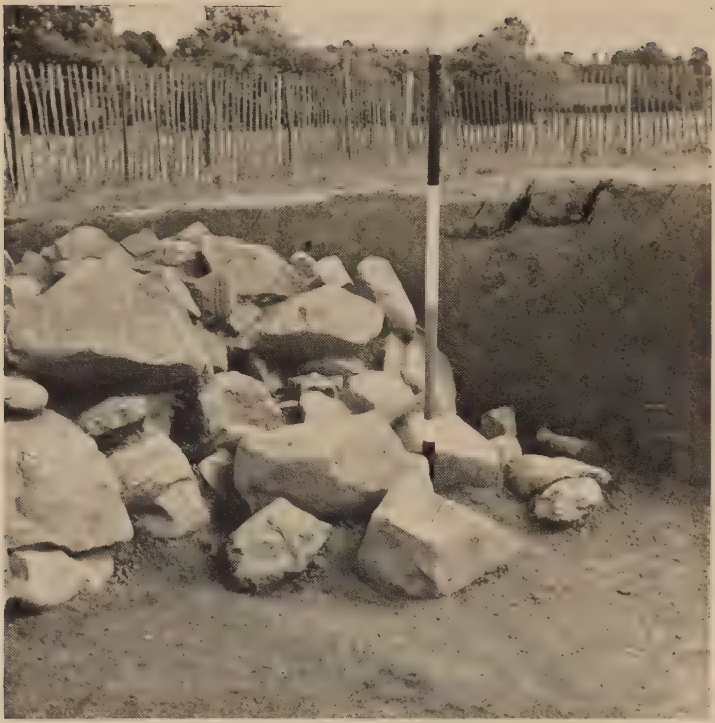
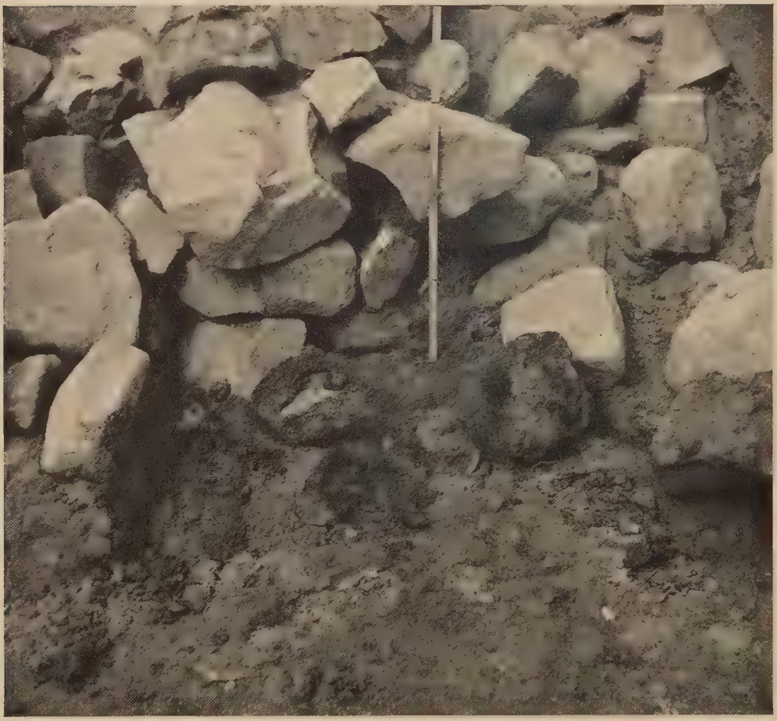


1. Pond Cairn: a typical talus of fallen stones—detail



2. The charcoaled floor of the interspace between turf stack and cairn ring: showing stones, fallen from the wall, stained with charcoal on their undersides

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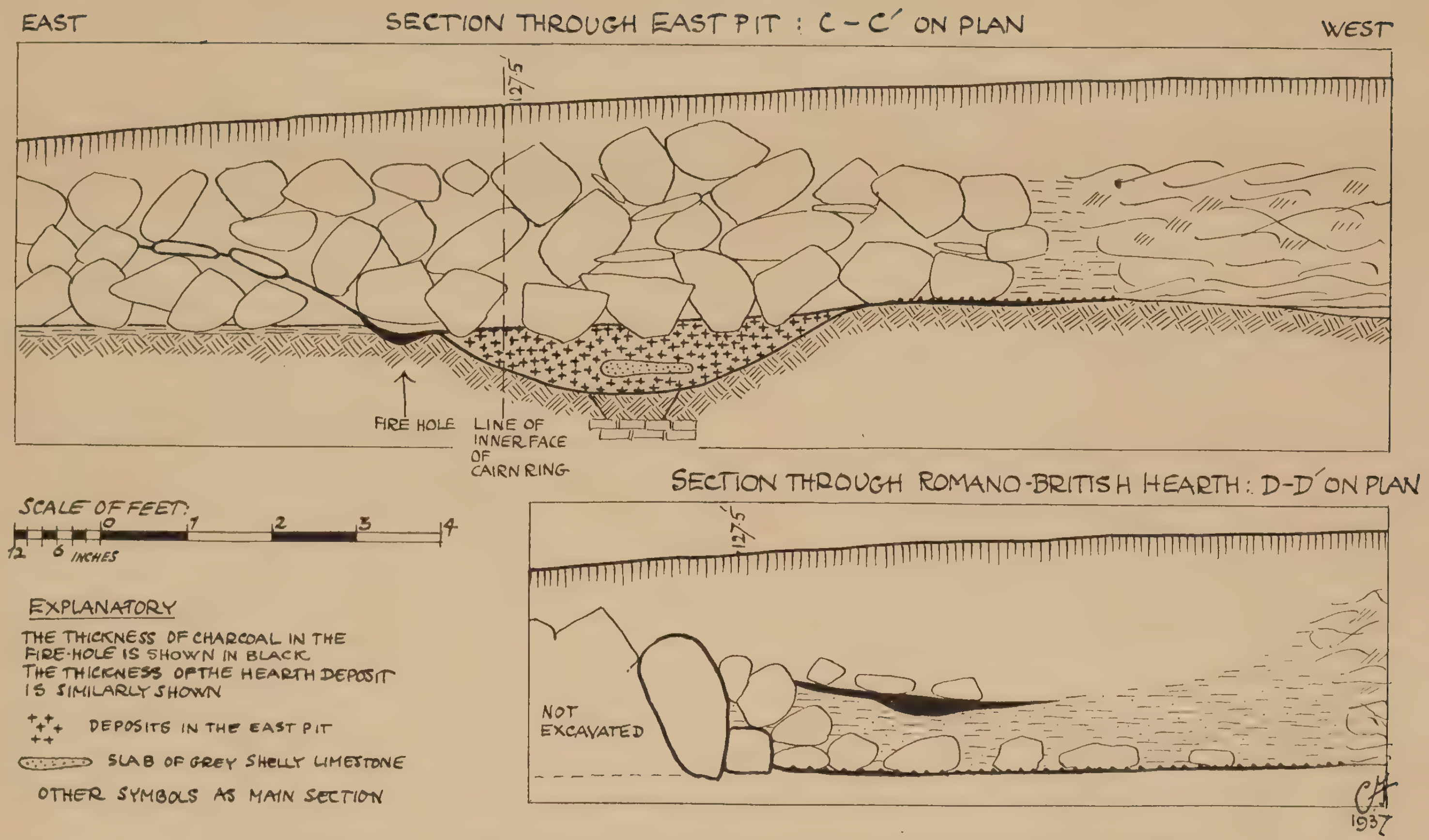
EAST
SECTION THROUGH EAST PIT : C – C′ ON PLAN
WEST
127.5′
FIRE HOLE
LINE OF INNER FACE OF CAIRN RING
SECTION THROUGH ROMANO-BRITISH HEARTH : D-D′ ON PLAN
127.5′
NOT EXCAVATED
SCALE OF FEET:
12
6
INCHES
0
1
2
3
4
EXPLANATORY
THE THICKNESS OF CHARCOAL IN THE FIRE-HOLE IS SHOWN IN BLACK
THE THICKNESS OF THE HEARTH DEPOSIT IS SIMILARLY SHOWN
DEPOSITS IN THE EAST PIT
SLAB OF GREY SHELLY LIMESTONE
OTHER SYMBOLS AS MAIN SECTION
CH
1937

Fig. 5. Pond Cairn: Sections of East Pit (c-c′ on plan) and Romano-British hearth (d-d′ on plan)

micro-analysis of a portion of the blackest sample available; but since vegetation in the form of seeds and wood charcoal was already known to be present, only bulk determination seemed likely to provide significant results.

The following points then are established. The grey-black deposit in the pit consists largely of charcoal sticks and ashes from a fire, mainly of brushwood, some collected while still hot. Cereals and cultivation weeds presumably in the form of sheaves—whether burnt or not is debatable—were placed with the carbonized mass, mainly on the top. The deposit also contained soil, which could easily have got in through the agency of earthworms. A delicately patterned (fossiliferous) slab of stone was placed in the middle of the deposit.

The Ramp and Fire-hole. The soft floor of the pit merged on the east side into a hard trodden slope. It was reddened; further investigation showed that the redness had its source in a shallow hole (marked by a pin in pl. LXI, 1). This was filled with fine charcoal 'paste' with a 'piece of red clay looking like burnt daub' in the centre. Evidently a fire had been lit here and the flames licked the ramp of trodden clay.[1] Above the fire-hole was a floor of small stones, tilted upwards, set in a hard dirty earth. All these features are shown in section in fig. 5.

The ceremonial meaning of the series of acts which have left their mark in this area of the cairn is difficult to determine. The significant element of the deposit in the pit is surely the cereals. Due weight must be attached to the breaking of the cairn ring, and the importance of the deposit is attested by the raising of a stone-heap over it. The fire in the hole on the ramp suggests a ritual act connected with the pit.

East entrance (?). Bearing these points in mind, it seemed possible that the cairn ring might have been broken down to construct some sort of ceremonial entrance east of the fire-hole, and the investigation was therefore extended outwards—with little result. The excavation yielded no trace of flanking sills or dry-walling, or of paving or cobbling. The soil at the original ground level was found to be dirtier and harder in this area than in the section cut in the south side of the ring, but there are reasons for holding that the cairn was built by folk approaching it from the east, and the traffic would be heavier on this side.

At the edge of the stony area, which here, as in the rest of the circuit, had been robbed of stone in modern times, three large stones were set like an inverted 'V', the point of which was exactly on the axis of the pit and ramp, and a slab of exceptional size lay near them (pl. LXI, 2, left-hand side); but these features, though occurring nowhere else in the cairn ring, are not convincing evidence for an entrance. The outer kerb of the ring has certainly been robbed hereabouts;

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[1] A sample of the ash was handed to Dr. North; he finds 'there is no appreciable amount of coal present'.

whether it was originally complete or no on the axis of the pit and ramp (see pl. LXV) can never be known. All one can suggest is that the inner wall of the cairn ring was broken down sufficiently to make standing room for the persons or person officiating at the fire-hole, and at the filling of the pit, and that if there was an approach from the east at this point it went over the ring, rather than through it. That is, any constructional work was destroyed when the upper portions of the ring were removed by farmers.

Romano-British hearths. A later occupation of the site remains to be considered. On clearing the inner wall of the cairn ring, reddened clay and charcoal were met with at several points in the angle formed by the wall and the east stone-heap, over an area some 8 ft. in length and 3 ft. in breadth (pl. LXII, 2).

Three centres of intense or prolonged burning were located, consisting of grey ash surrounded by hard reddened clay; beyond the centres there was much charcoal. Further examination showed that two of these centres belonged to one hearth, A + B; a base of clay daub burnt to a brick red, between them, suggested the remains of a hearth wall. The fire in hearth C, where the burning apparently was less intense, had been put out by dropping a flat oval piece of Lias rock on to it (pl. LXIII, 1).[1]

Food grains were noticed in the charcoaled surface soil beside all these hearths; in particular around hearth C there was a heavy deposit, in places a continuous layer. In the photograph (pl. LXIII, 1) of this hearth, the grains lie mainly between the foot-rule and the stone. Professor Percival's report on these grains is in Appendix III. He found barley in the material from hearths A and B; and both 'bread wheat and barley grains in that from hearth C, the latter being the more abundant'.[2] (See pl. LXIII, 2.)

Charcoal from hearth A + B yielded to Mr. Hyde's analysis slight remains of hazel; from hearth C there was a hazel nutshell, but the fires were lit with hawthorn, no less than twenty-one determinations of this tree being obtained.

The date of the hearths can fortunately be fixed, for a Romano-British potsherd—a portion of the rim of a black bowl, its outer surface scored with a smooth point—was found in charcoal-stained loam beside hearth C. My colleague Mr. V. E. Nash-Williams recognizes it as a type commonly occurring on fortress sites in South Wales and dating from the second century A.D.

The stratigraphical position of these hearths is important, since they show the exact amount of silting that had taken place between *c.* 1300 B.C. and *c.* A.D. 150. They lie on the loamy filling of the interspace; the outer margins of A + B and C respectively touch each other, and they are therefore strictly contemporary. The surface of the silting (p. 148) here slopes downwards from the large slabs of the wall of the cairn ring towards the centre, as is shown in pl. LXII, 2 (left-hand pin, hearth C). Under the silting lies the talus from the cairn ring (pl. LXII, 1, left-hand side); while over the hearths lies a mass of stones, representing a later ruination of the ring (pl. LXII, 1, between the left-hand pins). The silting had reached a depth of 8 to 12 in. when the squatters settled there. They chose a sheltered corner, where the east stone-heap joined the cairn-ring. The sequence of events is shown in the section, fig. 5.[1]

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[1] It has not been cleaned; the whiteness is the result of weathering *in situ.*

[2] My colleague Mr. H. A. Hyde has since found wheat grains in the material from hearths A + B also; and he has found chess (*Bromus secalinus*).

The dimensions and appearance of Pond Cairn. As the plan (pl. LXV) shows, the length of the kerb-wall of the cairn ring which has been preserved is about two-thirds of the circumference. Since the monument is not truly circular or concentric in any of its parts, a just measure of its dimensions can best be obtained by taking two diameters, each where the kerbs are present at either end, and as far apart as possible. The following measurements comply with this requirement, and are taken through what is obviously the centre of the structure, the point where the urn was placed.

Table of Measurements

	8° East of True North.	*160° East of True North.*	*Mean (to nearest inch).*
	ft. in.	ft. in.	ft. in.
Turf stack—diameter	17 11	17 8	17 9
Interspace—north of urn	5 0	6 2	4 10
„ south of urn	4 1	4 2	
Central area—diameter, being total of above .	27 0	28 0	27 6
Cairn ring, thickness, north of urn	15 11	17 7	17 0
„ „ south of urn	16 6	17 11	
Cairn, overall, kerb to kerb	59 5	63 6	61 6

The evidence for the original appearance of Pond Cairn has been set out at length in the preceding pages. It is summarized in the form of an ideal reconstruction, in fig. 6. Here the plan of the cairn—with the flat top of the turf-stack, and the rounded hump of the carefully built-up cairn ring, with the projecting east stone-heap—is shown. These features can be more readily appreciated in the section shown in the same figure.

Directly the monument was finished decay set in. The upper portion of the inner facing of the cairn ring, and the top of the turf-stack, slid into the interspace. Stability came when the turf-stack was a grassy dome and the interspace a grassy hollow. This was the state of the monument when the squatters settled on it; the cairn ring stood up rather rugged and ruined, but substantially as it was built. This condition is illustrated by the second section on the same figure.

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[1] To complete the history of Pond Cairn it should be pointed out that small spalls of flint were found in various places during the course of operations; some were burnt, some unburnt. See Appendix V.

These two sections can be compared with that on pl. LXV, which shows the condition at the present day. This present-day condition is also illustrated in pl. LIII, taken when the work of excavation was completed. The standing figure

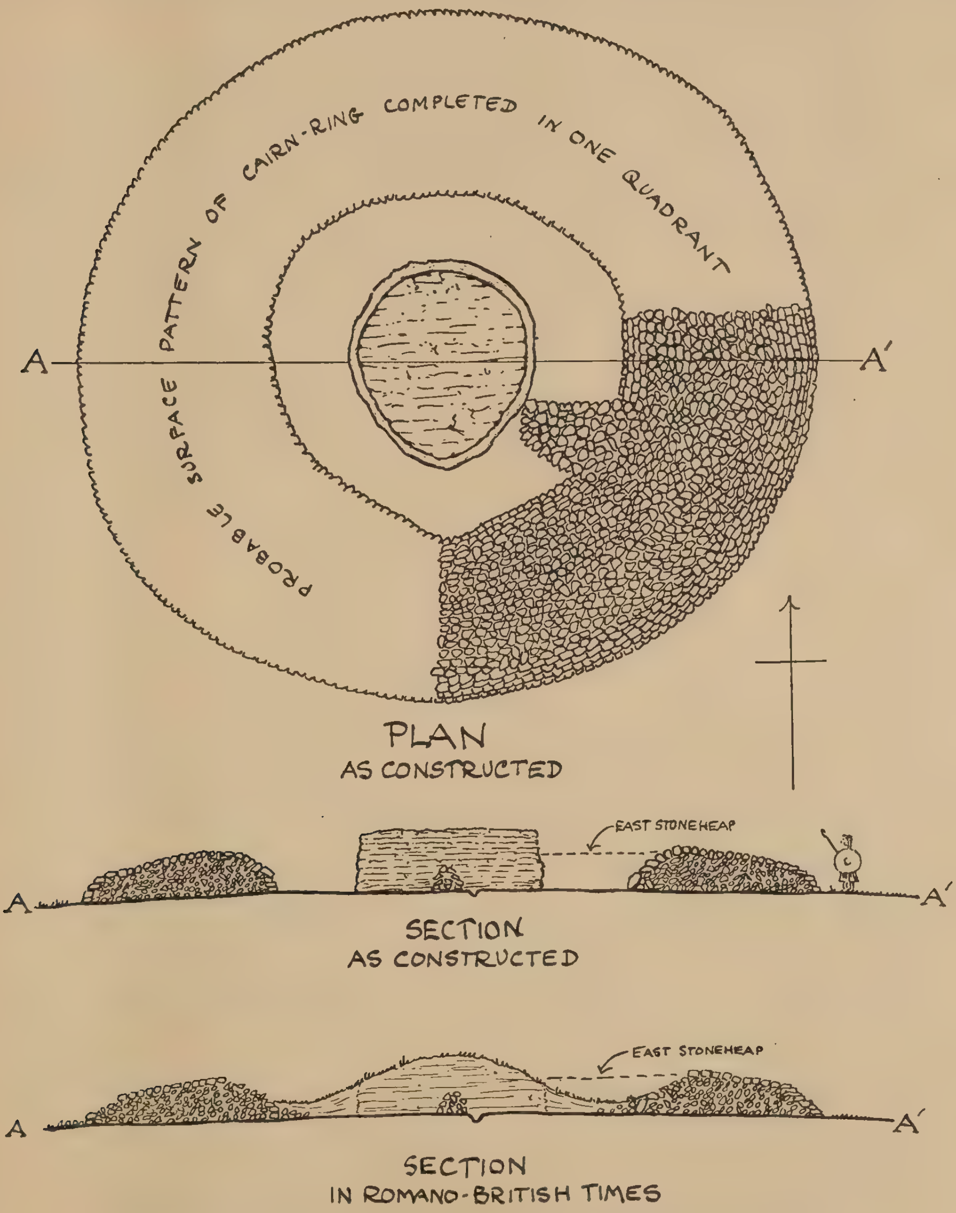

PROBABLE SURFACE PATTERN OF CAIRN-RING COMPLETED IN ONE QUADRANT
A
A′
PLAN
AS CONSTRUCTED
EAST STONEHEAP
A
A′
SECTION
AS CONSTRUCTED
EAST STONEHEAP
A
A′
SECTION
IN ROMANO-BRITISH TIMES

Fig. 6. Reconstructed plan (one quadrant complete), and sections of Pond Cairn at different periods

gives the scale; the site of the urn-burial is on his right hand, between the two 'islands' left to illustrate the character of the turf-stack, and to show the ground level prior to excavation. The section on which his hand rests is that photographed in pl. LI, 2. The kerb is well shown; also the zone robbed of its stone in modern times which now divides the cairn ring into two.

In this connexion it is pertinent to inquire how and why the cairn ring, an exposed heap of stones in *c.* A.D. 150 as in *c.* 1300 B.C., obtained its existing covering.

The stones lying on the Romano-British hearth A + B (pl. LXII, 1) suggest that soon after that period destruction by man of the monument began—the levelling down of the cairn ring or removal of its stones; for no stones had fallen from the inner wall in that area since the period of 'rapid silting' some 1450 years before, and the structure must have been completely stable.

Organized stone-robbing, as we know, accounts for certain features of the cairn ring as seen to-day; but it will not account for the overlying soil. That from 4 to 12 in. of earth should accumulate over the stones of the ring between *c.* A.D. 150 and A.D. 1937, though none had so accumulated between *c.* 1300 B.C. and *c.* A.D. 150 is a particular instance of a general and still unsolved problem. The lowering of the dome of the turf-stack can account for some but not all of this soil.

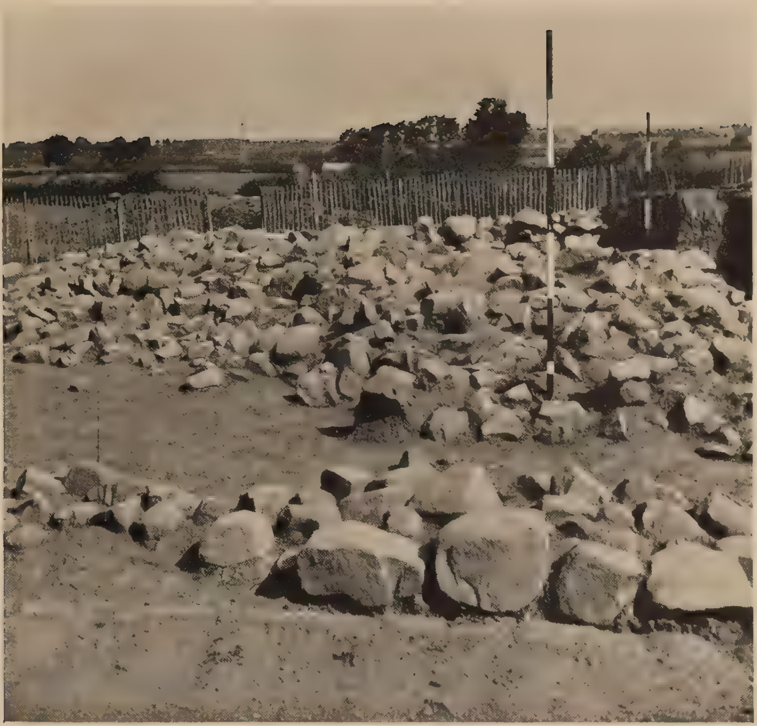
I have elsewhere suggested[1] that such soil is mainly dust blown from arable fields on to areas which by reason of their unsuitability for cultivation have been allowed to grow bushes and scrub. When clearance takes place, all stones sticking through this accumulation of soil are removed by the farmers; and ultimately, when ploughing the mound is attempted, every stony obstacle within a few inches of the surface is hooked out; until at length coulter and share meet no obstacle at all and the very nature of the structure is forgotten.

If this is a correct explanation in this instance, then we must infer that extensive arable cultivation of the Coity region did not begin until the Christian era. This is very likely to be the case.

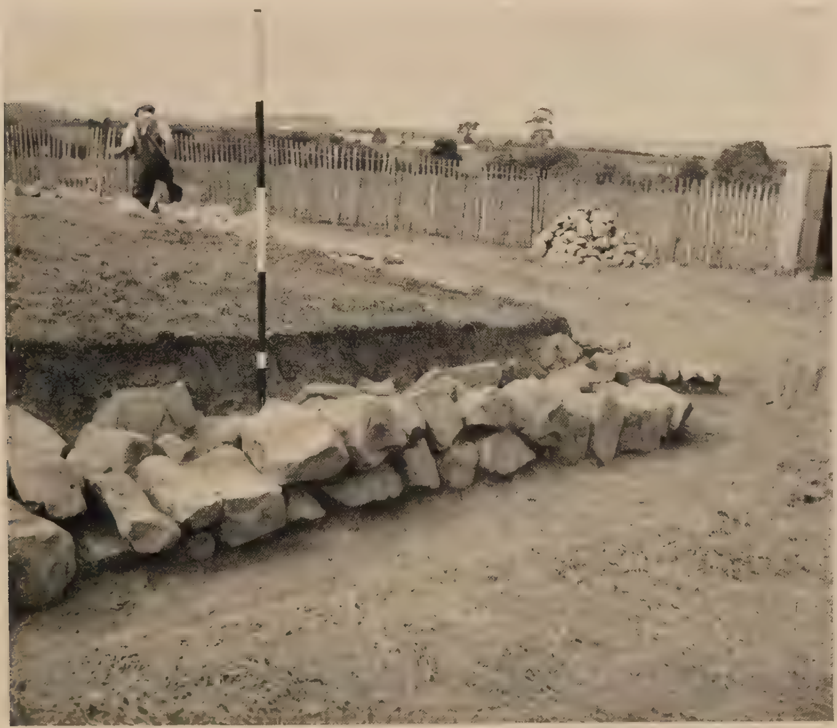
Summary. Pond Cairn is a hybrid construction; an earthen centre surrounded by a stone ring. The diameter is ±61 ft. It was erected over the ashes of an adult personage at the beginning of Middle Bronze Age B (*c.* 1300 B.C., on the conventional dating), to judge from the cinerary, an overhanging-rim urn of Abercromby's type I, phase ii. There were no secondary burials.

The sequence of events at the cairn probably provides the most complete record of Bronze Age burial ceremonial hitherto recorded in Britain. In detail the meaning of the ritual which the remains indicate is obscure, but the general significance can hardly be in doubt. Having given the facts in the preceding pages, I shall venture to include in this summary a measure of interpretation.

[1] *Proc. Camb. Antiq. Soc.*, vol. xxvi, 1925, p. 101.



1. Pond Cairn: the kerb-wall defining the cairn, on the S. side. The structure of the cairn ring in general is seen to be quite haphazard: stones are nowhere laid with their flat surfaces leaning inwards as frequently at Simondston. The barren zone is the result of stone robbing in modern times



2. The kerb-wall on the N. side. Two courses are here in position. A heavy spill-over of stones, masking the structure, has been removed

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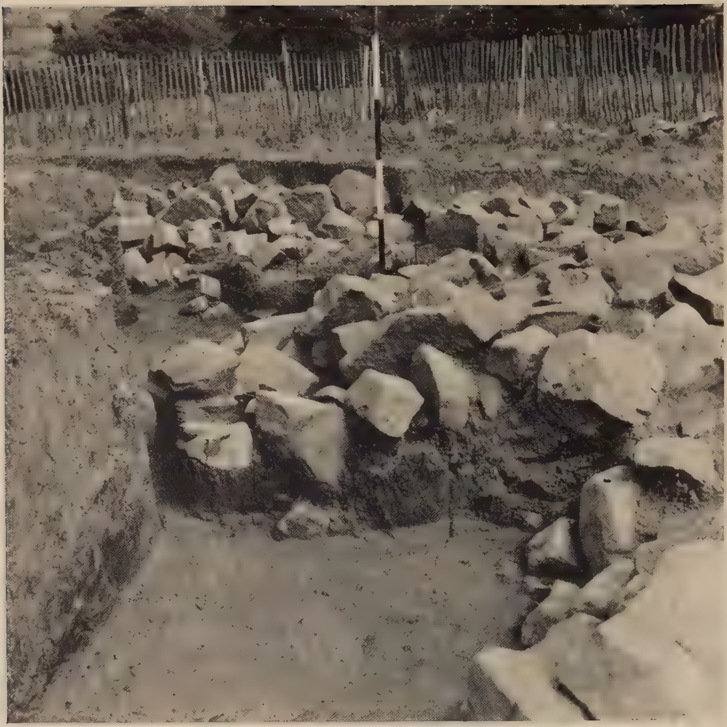
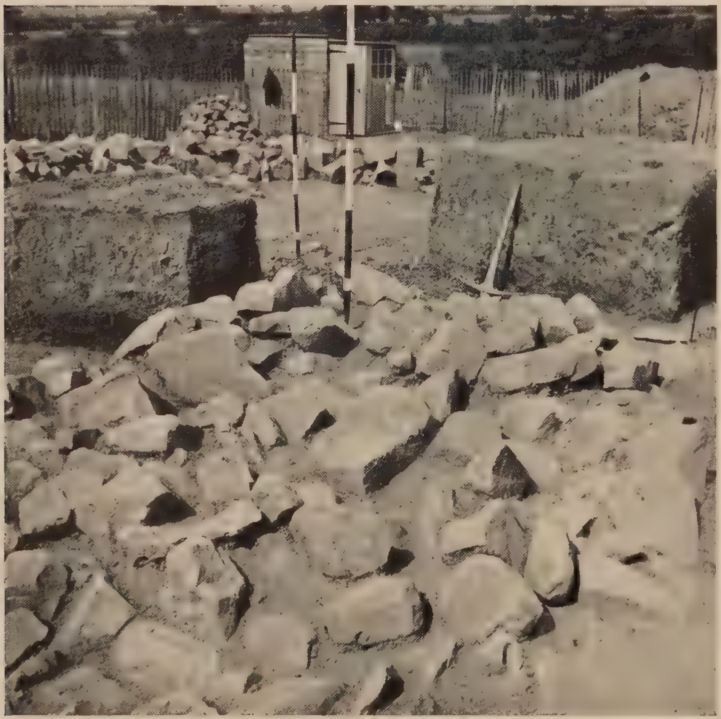


1. Pond Cairn: the eastern side of the cairn ring: showing the east stone-heap projecting into the circle. Some of the upper stones have been removed; the heap touched the turf stack (left). The outer stones of the heap rest in part on the loam filling of the interspace



2. The east stone-heap from SE. looking across the central area; it is higher than any surviving part of the cairn ring

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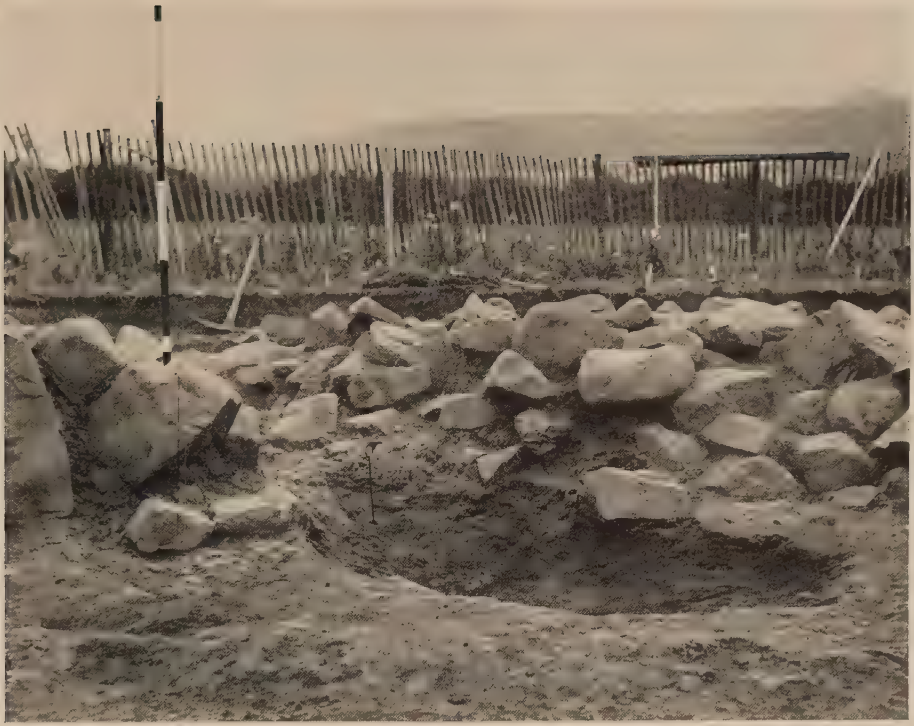
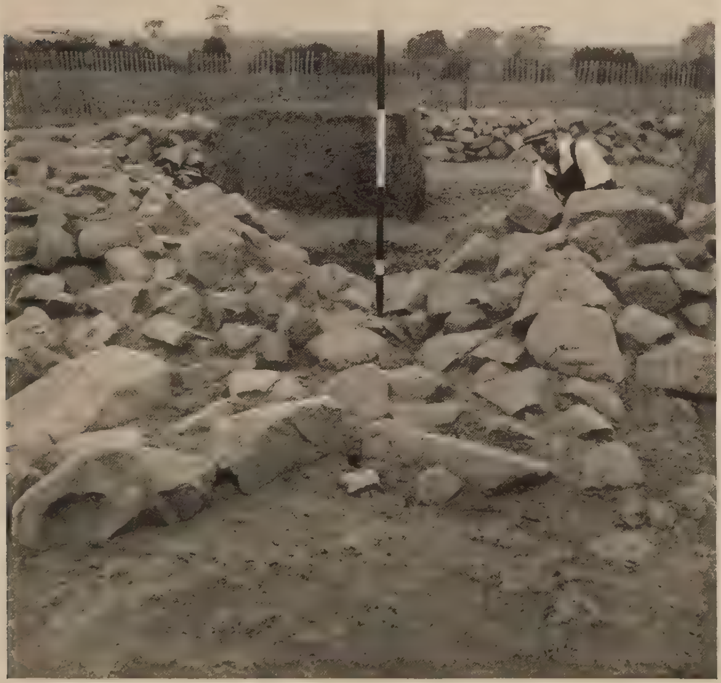


1. Pond Cairn: the east stone-heap removed, disclosing the east pit cut into the cairn ring—one sill-stone (right) overhangs the pit; the fire-hole marked by a ring pin; the entrance ramp over a partly removed (and reset?) portion of the cairn ring. Taken from the central burial



2. The east pit seen from outside the cairn ring. Three large stones set in the form of an inverted V may have some connexion with an entry

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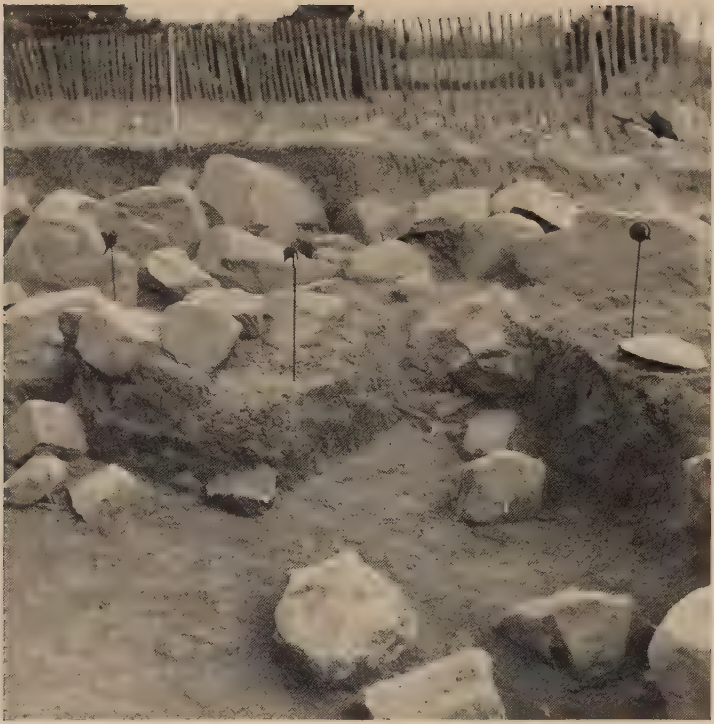
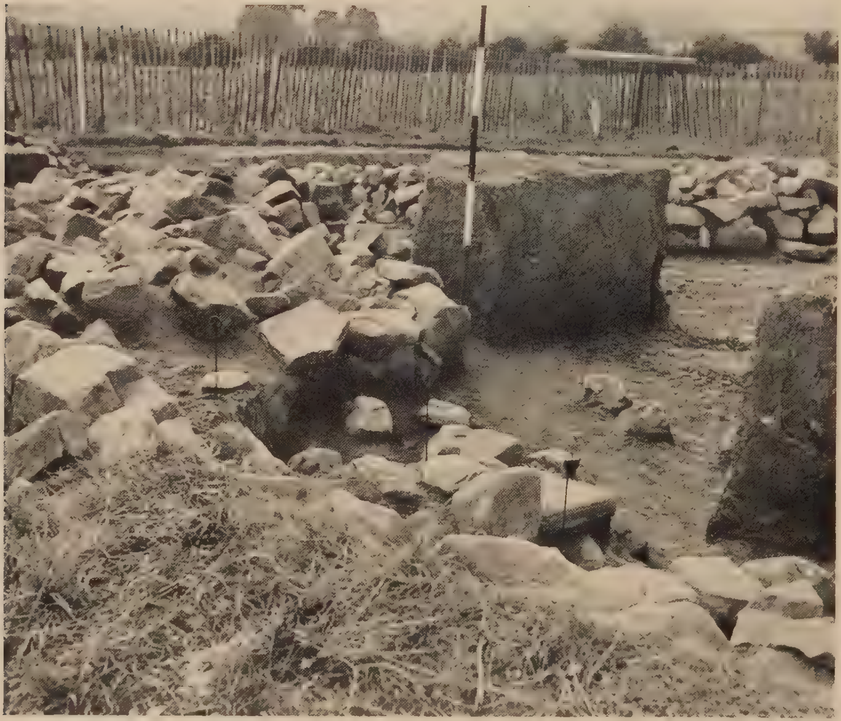


1. Pond Cairn: The Romano-British hearths from inside the circle. Also showing (*a*) upper part of wall stones of cairn ring; (*b*) fallen stones on original floor of interspace; (*c*) stones fallen from cairn ring on to hearth A-B—marked by the left and centre pins—after the desertion of the site in the second century A.D. The whole of the earthen covering of the ring of Pond Cairn is thus proved to be an accumulation of recent centuries



2. Romano-British hearths. The left-hand pin is in hearth C; the others in A-B, which merge. The hearths are seen to have been built in the sheltered angle formed by the junction of the east stoneheap and the cairn ring

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The site chosen for the burial-place of the high personage to be commemorated was first dedicated. A child's body was burnt; a pit was dug and the burnt bones, washed clean of charcoal, were scattered in it; at the same time the pit was being filled with stones. It was then sealed with clay. The body of the dead personage was subsequently burnt (not on the site). Flat stones defining the place where his (or her) ashes were to rest were then firmly set, and a small deep basin-shaped hole with a shallow extension, phallic in outline, made in front of the urn-site and the flat stones. The inurned ashes of the dead having been placed in position, with a slab of pink stone atop, ritual was performed which involved the filling of the bottom of the basin with charcoal from the pyre,[1] and the lining of the upper part, and its extension, with hot charcoal sticks, also presumably from the pyre. The basin was then filled with clay.

A small stone-heap and a turf-stack—the latter material brought from neighbouring marshy ground—were raised in rapid succession over and around the urn. This closes the first phase.

A complete ring of stones, some 16 ft. thick and probably 5 ft. high, rubble cored but with an inner facing wall and a carefully finished outer surfacing, was then built. The second phase of the ritual was then carried through; wood-ash was scattered on the turf-stack and the floor of the interspace between stack and ring;[2] the trodden floor of the interspace suggests a ceremonial movement of men round the stack.

The third phase is perhaps the most interesting of all; it seems to represent the dedication of the monument as a whole. The inner face of the cairn ring, which was a complete circle, was broken into at one point where a shallow pit was dug. The point selected was on the side of the monument (the east side) from which, to judge from the relation between urn and basin, the ashes of the dead man were brought. A sloping ramp was made in place of the vertical wall-face of the cairn ring at this point, and a small hole dug at the eastern end of the shallow pit. This was dedicated by fire;[3] much charcoal—some sticks, hot enough to redden the bottom of the pit in places—was thrown into it and a fire was lit in the hole referred to. Then an offering of the fruits of the earth—sheaves of wheat and barley with their associated weeds from the cultivated fields of the settlement—was placed on top[4] of the mass of material which now stood high above ground level.[5] One slab of stone, selected for its light colour and pattern, was placed in the centre of the mass of charcoal and cereals. The whole offering was then carefully enclosed, weighted down, and covered high with stones.

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[1] Burnt human bone was detected in the charcoal. See Appendix II.

[2] Specially burnt for the occasion? It was not from the pyre, for no burnt bone was found in it anywhere.

[3] Thus the person carrying out the dedication faced west, as did the person concerned in the ritual of the urn deposition.

[4] More grain was found at the top of the deposit than in its mass.—A. F.

[5] It was densely compressed by the weight of the stone-heap and yet was of considerable thickness.

The ceremonies connected with Pond Cairn, which may have taken a year or more to complete, were thus ended.

It is for students of comparative religion to assess the significance of the manifestations of ritual here discovered. The cumulative importance of (*a*) the human burial (sacrifice?) in the rite with which the work was begun, (*b*) the employment of the symbol of fertility in the central rite, and (*c*) the choice of vegetation (corn in particular) for the act which must be regarded as the final dedication, cannot be ignored. Fire played a part in each of the three main phases of the action. The observed facts, then, suggest that the person whose ashes were in the urn occupied a position of exceptional importance in the economic life of the savage community which occupied the area about 1300 B.C. Was he a 'corn king'—an embodiment of the corn spirit?

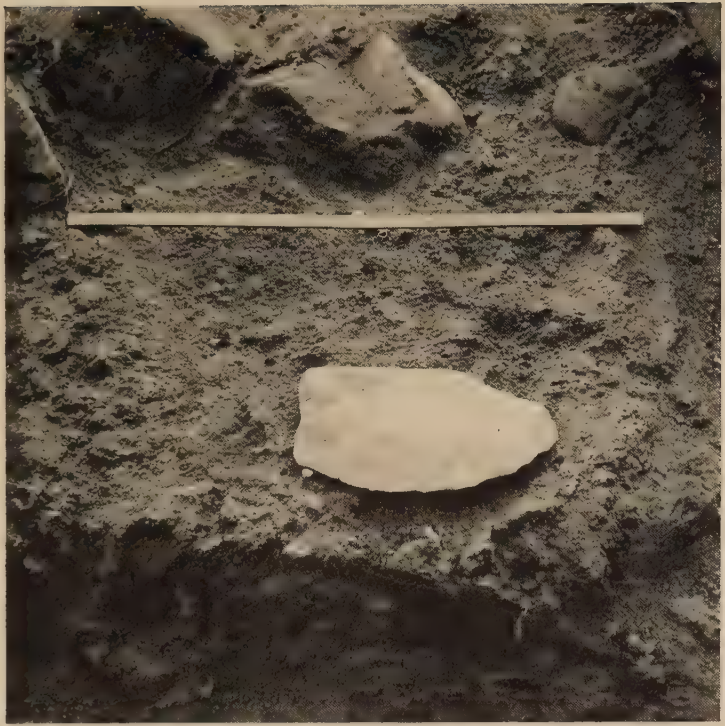
General Considerations[1]

The Simondston and Pond Cairns in Coity Higher Parish are situated close together, on the northern margin of the vale of Glamorgan, five miles from the sea and a convenient estuary, at a modest elevation (100 to 200 ft.), by no means the highest available in the immediate neighbourhood. One was sited on a false crestline, as seen from the side from which its material came, and, by inference, as seen from the settlement of its makers; the other was in a lower and more sheltered situation. They are both on Lias limestone, and therefore the economic basis of their makers was similar. A thin layer of clay (3 to 18 in.) is usually found overlying this rock in Glamorgan, and it must have carried a forest growth—mainly ash and other trees demanding calcareous soil. In Mr. Hyde's words (Appendix IV, p. 176), 'Woodland, with a preponderance of ash is the natural growth on the Lower Lias hereabouts'. This woodland would hardly be comparable in density to the 'damp oakwood' complex on the deep clays of the glacial drifts, nor would it offer the same difficulty to man; for the soil is fairly well-drained. Consequently we find that the Lias formation was widely occupied in Neolithic and Bronze Age times in the Vale, as a recently published paper[2] shows.

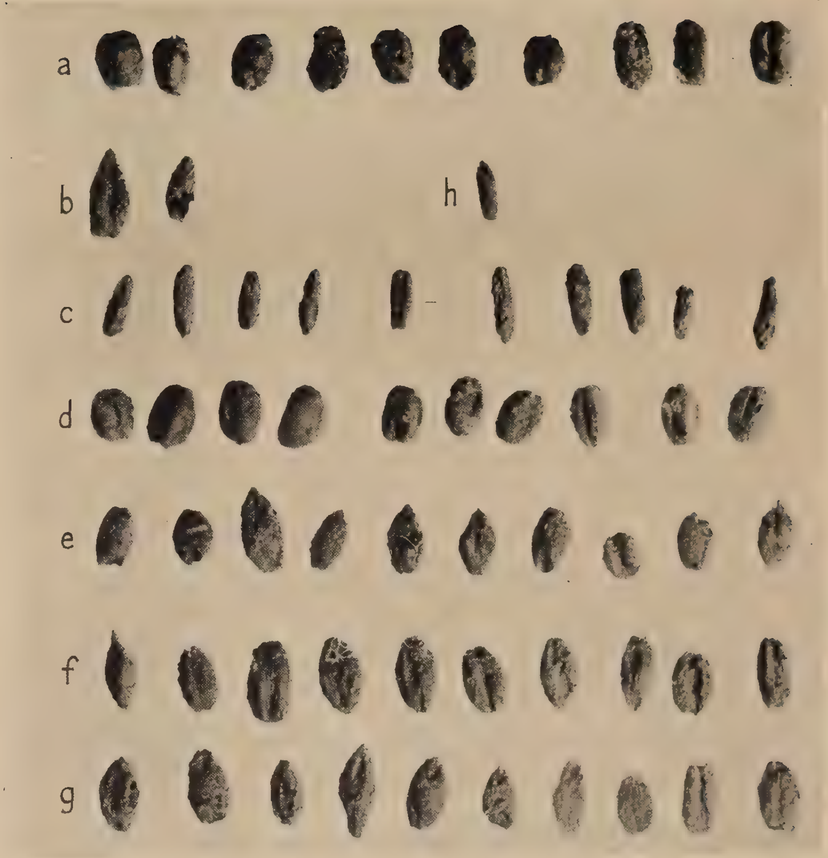
Simondston Cairn is the earlier of the two, its primary (cremation) deposits in 'enlarged food vessels' indicating a date in Middle Bronze Age A, round about 1500 B.C. Its carefully wrought construction shows that, in cist and cairn alike, stability and permanence were the chief aims. The absence on its floor

[1] For detailed summaries of the character of each cairn see pp. 141 and 156.

[2] A. Fox, 'The Dual Colonization of East Glamorgan', *Arch. Camb.*, 1936, maps I and II, and p. 101.



1. Pond Cairn: hearth C. Exactly under the piece of Lias limestone is a core of fine grey ash: the stone was pressed on to the fire to put it out by the last person to use the hearth. Numerous charred grains of wheat and barley lie on the red and black charcoaled area between the stone and the footrule. The piece of Romano-British pottery was found here



2. Cereals, &c., from Pond Cairn

(*a-c*) *East pit, Bronze Age:* (a) wheat (*Triticum vulgare* or *T. compactum*), (b) barley (*Hordeum* sp.), (c) chess (*Bromus secalinus*)

(*d-h*) *Hearths A–C, Romano-British:* (d) wheat (*ut sup.*), hearth C; (e) barley, hearth A; (f) barley, hearth C; (g) barley, hearth A B; (h) chess (det. H.A.H.), hearth (E. of centre)

All, except (h), det. John Percival

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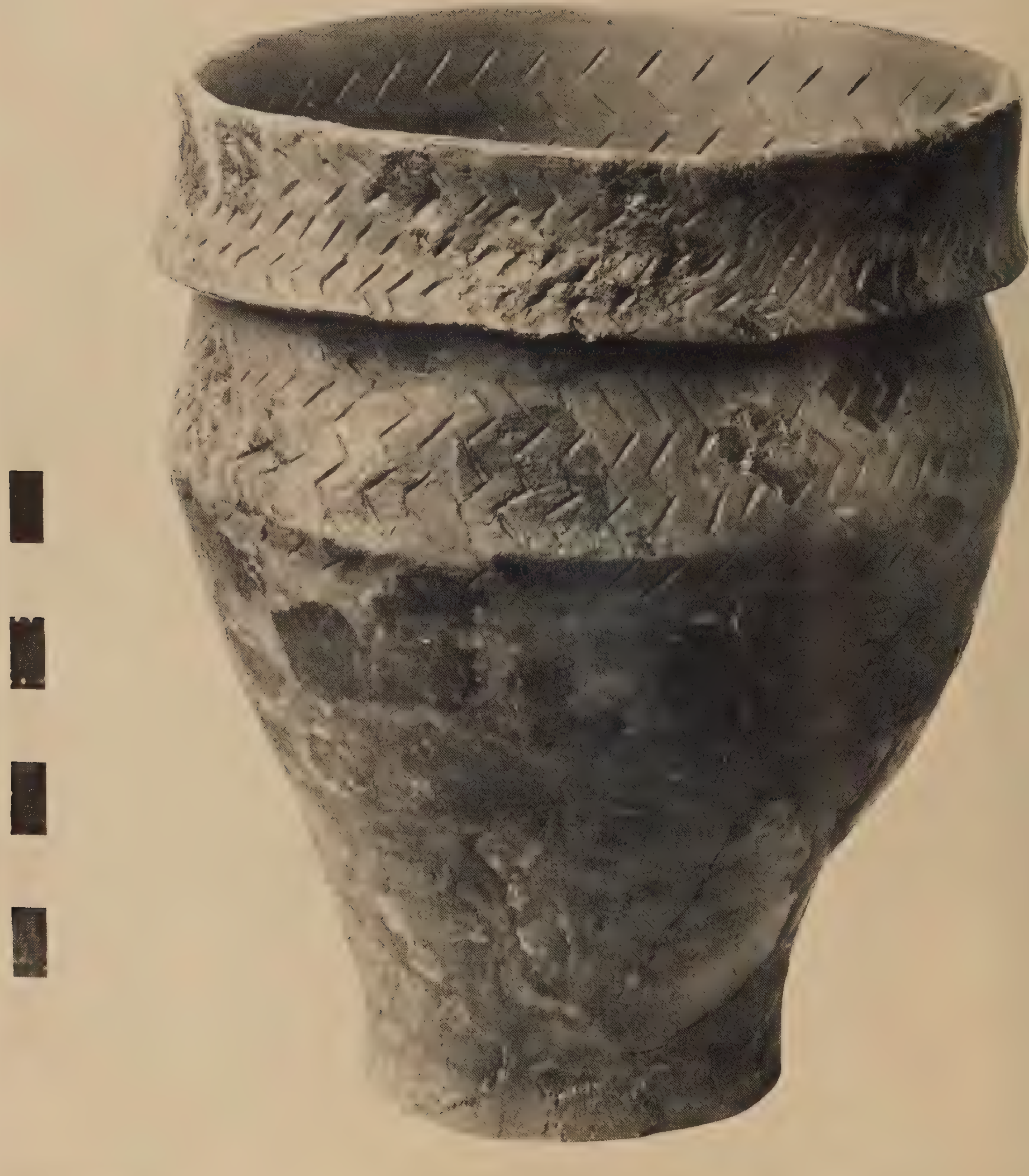

Pond Cairn: the collared urn which contained the primary cremated burial (restored). The scale is in inches

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of any trace of ritual practices emphasizes its classic simplicity. The only structural elaboration presented by it was a cist-stone cup-marked and pecked.

Pond Cairn is definitely later. The deep collar of its well-wrought cremation urn belongs to Middle Bronze Age B. On the conventional dating, it can hardly be less than 150 years later than Simondston—about 1300 B.C. It provides evidence of a dramatic and prolonged ritual; it was a showy and indeed fantastic erection; its constructional technique was superficial and unsound; its material was casually collected; in brief, it provides an early example of the baroque. Finally, though cairn construction dominates, it is in part an earthen barrow—a hybrid form.

On the whole the lithology of the cairns was similar, the mass of the material in each case being Rhaetic sandstone. But whereas the sandstone of Simondston was quarried—i.e. levered out along bedding planes and joint planes, and of even sizes—the sandstone at Pond Cairn consisted of weathered boulders and pebbles, varying greatly in dimensions and evidently picked up from the surface.[1]

It might be thought that nothing can be gained by dealing with two such different structures in one paper. But there is a link. Subsequent to its erection Simondston Cairn was used as a cemetery, the approximate date of which is fixed by the occurrence of a collared urn similar to, but typologically earlier than, that at Pond Cairn. In this cemetery, the simplicities characteristic of the primary burial have no place. Holes are made in the ground and afterwards filled with earth or stones; charcoal and burnt clay are widely scattered around the most outstanding interment; coloured slabs of stone are prominently displayed.

Now these features are paralleled at Pond Cairn. We recall the central pit with its stony filling, the remarkable scatter of charcoal in the interspace, the slab of grey fossiliferous limestone placed in the centre of the deposit of cereals in the east pit, the piece of red Triassic[2] conglomerate covering the open mouth of the urn.

There are, of course, special features at Pond Cairn, but nothing culturally inconsistent with the Simondston cemetery. We may then regard the folk who erected Pond Cairn as the same people who were using Simondston Cairn as a cemetery. Pursuing the same train of ideas, we may say that the differences which have been enumerated between their culture and that of the builders of Simondston Cairn are so profound that we must regard them as intruders in the Coity district.

Consideration will now be given to the sources of the two cultures.

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[1] See Appendix V by Dr. North, p. 180.

[2] This was the only piece of red Trias at Pond Cairn, and it had to be fetched from some distance (see fig. 2).

Everything points to the Simondston Cairn builders as representing an ancient cultural tradition. The careful structural work suggests continuity with megalithic practice; and the cup-marks on the cist are of a simple unspecialized character which occur on Welsh chambered tombs.[1]

It is not easy to find an exact parallel for the truncated-cone shape of the enlarged food-vessels in the cist, but the successive ridges and hollows on the upper half of each suffice to indicate their derivation from a class of food-vessel, that with grooved shoulder (Abercromby, type 2), common in Yorkshire and widely distributed in the Highland Zone. Their extreme debasement in design and craftsmanship is such as might be expected in an area remote from any possible centre of diffusion.

It is of interest that there was found in 1901, at Candleston (see map, fig. 7), close to the Ogwr-Ewenny estuary, a cremation in a cist associated with a food-vessel.[2] The cist-structure conformed to a megalithic tradition, being similar to that found at Corston in Pembrokeshire by Fox and Grimes,[3] and commonly met with in Spain and Ireland. That the Simondston folk represented a later generation of the group that settled in this estuary is probable enough, having regard to the geographical relationship; if so, they came from the west.

The trading connexions of the Simondston Cairn builders were, however, definitely with the east. The flint tools in the cist were not made from beach pebbles but from imported material; west Wiltshire and west Dorset are the nearest source for these, and for the marcasite cup.

We may now turn to the secondary culture represented by the later cremations at Simondston and by Pond Cairn.

Parallels for the peculiar hybrid construction of Pond Cairn were sought for, primarily in South Wales. Mynydd Carn Goch, Llangafelach, is four miles north-west of Swansea, and the eponymous 'Red Cairn' was excavated in 1856. A ring of stones was found 15 to 18 ft. in thickness, surrounding an area about 24 ft. in diameter. A mass of earth covered the cairn ring, and filled the central area; the description suggests a structure closely resembling Pond Cairn. Numerous cremation burials, primary and secondary, were found and much charcoal was associated with them. The ceramic evidence points to the Middle Bronze Age as the period of construction of the cairn.[4]

Aileen Fox in 1936 drew attention to a group of barrows between the Ogmore and the Thaw in the Vale of Glamorgan, and plotted them on a map.

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[1] Wheeler, *Prehistoric and Roman Wales*, p. 82.

[2] Ward, *Arch. Camb.*, 1919, p. 327, fig. 1. The vessel was 'very coarse' and 'rudely decorated' (Abercromby, type 3).

[3] *Arch. Camb.*, 1928, pp. 137 ff.

[4] Two collared urns and a pygmy-cup are in the British Museum, and one cordoned urn is in the museum of the Royal Institution of Swansea. See *Arch. Camb.*, 1856, pp. 63–7, and *Bronze Age Guide*, British Museum, 1st ed., 1904, fig. 20.

The distribution which is on the plateau of the Vale, above the 200-ft. contour, 'centres', she remarks, 'on the little estuaries between Llantwit Major and Monknash, and points, I think, to colonization by a distinctive group expanding inland towards the crossing of the Thaw at Cowbridge'.[1] Fig. 7 is based on her map.

Mr. W. F. Grimes has recently examined one of these barrows—the Breach Farm barrow; it is of earth surrounded by a stone ring. The important finds associated with the primary burial (by cremation), some of which are of Breton character, place it at the beginning of the Middle Bronze Age.[2] Another of these barrows, the Colwinston barrow, was excavated in 1887; multiple interments of the Late Bronze Age (cordoned urns) were found within a ring-wall of stone on a stone floor.[3] In both these burial mounds we observe the essential and unusual feature of Pond Cairn, a stone ring associated with an earthen barrow, but the structures differ in detail—the relationship is collateral rather than direct.

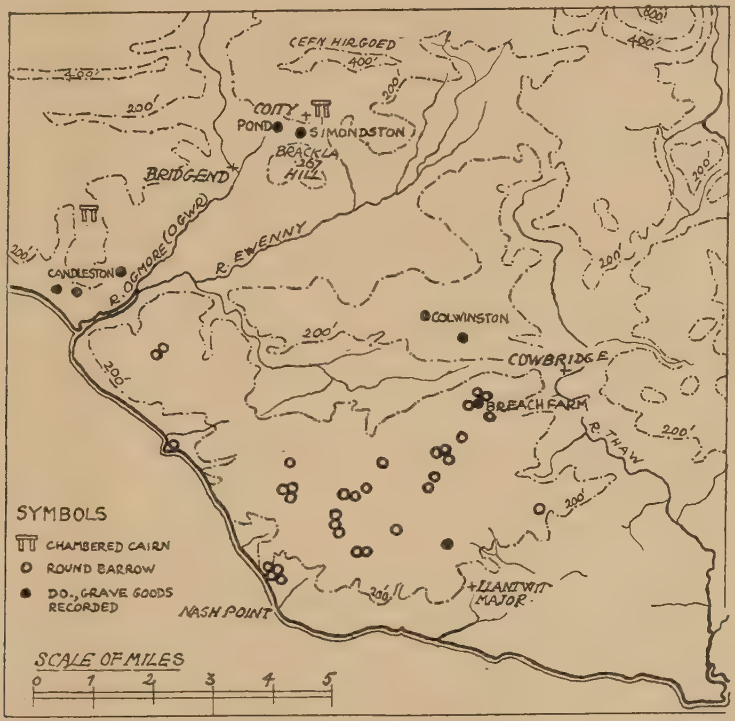
CEFN HIRGOED
400'
800'
400'
400'
200'
200'
COITY
POND
SIMONDSTON
BRACKLA 267 HILL
BRIDGEND
R. OGMORE (OGWR)
R. EWENNY
CANDLESTON
200'
200'
COLWINSTON
200'
COWBRIDGE
BREACH FARM
R. THAW
200'
200'
200'
LLANTWIT MAJOR
NASH POINT
SYMBOLS
CHAMBERED CAIRN
ROUND BARROW
DO., GRAVE GOODS RECORDED
SCALE OF MILES
0
1
2
3
4
5

Fig. 7. Round barrows and chambered cairns in the Bridgend–Cowbridge district, Glamorgan

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[1] A. Fox, *loc. cit.*, *Arch. Camb.*, 1936, map II, and p. 110.

[2] Now published: *Proc. Prehist. Soc.*, 1938, pp. 107–21.

[3] *Proc. Soc. Ant.*, 1887, xi, 430. There is no plan of the barrow in the article, but a reconstruction based on Mr. Hilton Price's description and measurements produced the result described. Two of the urns are in the British Museum.

In Britain generally, unbroken stone rings in barrows are distinctly rare. Occasionally a circle of separate stones or boulders is found within the mound, but such are probably typologically connected with the stone circle proper, or with cairn peristaliths; the only close parallels which came to light were on the other side of the Bristol Channel. Wick barrow, near Stogursey, excavated by Mr. H. St. G. Gray, revealed a circular wall surrounding the primary burials.[1] Again, on Blackdown, Mendip, circular stone heaps or walls formed part of the structure of the three cairns or barrows excavated by members of the Bristol Spelaeological Society.[2]

In searching through these Somerset records we were, as children say, 'getting warm'; for the true parallels, in abundant measure, are in Devon. Here it is recorded that 'Composite barrows, partly of earth and partly of stone, the materials separate, are numerous'. The methods of arrangement of earth and stone vary; characteristic forms are figured in the *Report* of the Barrow Committee of the Devon Association, from which the above quotation is taken.[3]

Of these 'Hameldon', one of a number of Hameldon Down, on the eastern edge of Dartmoor, springs to the eye as providing a counterpart of the essential structure of Pond Cairn. 'The margin of the barrow is built of stone': it is indeed a ring of stones heaped up; there is a small central cairn; the rest of the structure is 'peaty earth'.[4]

One of the later reports of the Barrow Committee yields a yet closer parallel.[5] A round barrow of the Chapman group at Parracombe excavated in 1905 shows a central stone heap covering an interment pit containing a cremation burial; a barrow of 'heaped turf', quite certainly, from the figure, a turf-stack of Pond Cairn type; an 'interspace'; a ring of heaped stones. Charcoal was 'extremely plentiful in the turf mound'.[6]

The positions of all the structures mentioned in this survey are shown in the sketch-map of south-western Britain, fig. 8. All the known hybrid cairn barrows in South Wales, it will be observed, are close to the coast, and the facts we have marshalled point to one conclusion only. When, moreover, we

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[1] *Proc. Som. Arch. Soc.*, liv (ii), 1908, pp. 1–77.

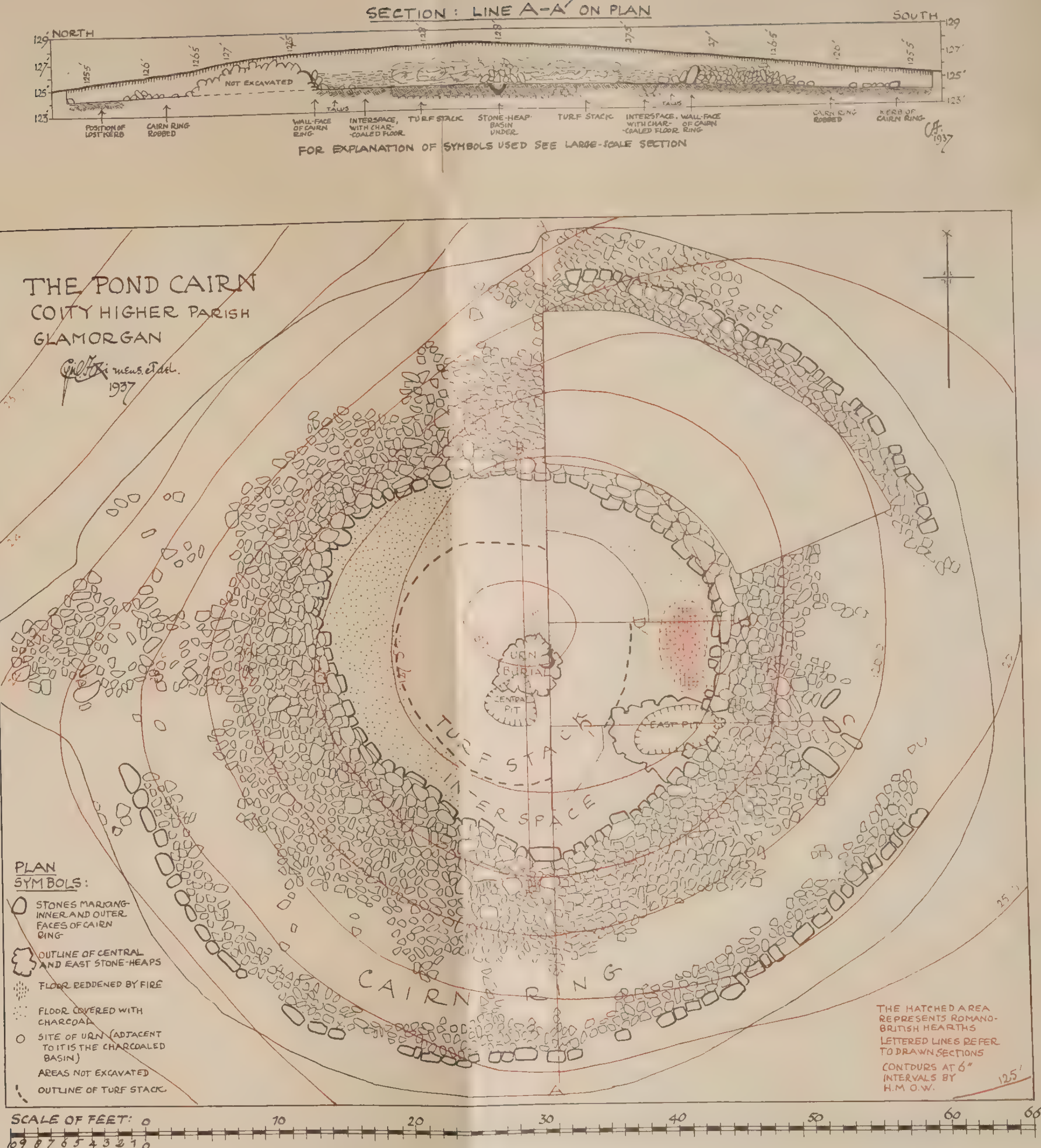
[2] The reference numbers of the society for these barrows are T. 13, T. 14, and T. 20, but they are not yet published, and I am much indebted to Professor E. K. Tratman for information concerning them.

[3] *Rep. and Trans. Devon Assoc.*, 1902, pp. 104–46, especially p. 107.

[4] The original account is in vol. 5 of the *Transactions*, 1872, pp. 554 ff. An obviously secondary cremation burial was associated with a gold- and amber-hilted knife-dagger. Thus the structural form represented at Pond Cairn was present in Devon at an early date.

[5] *Trans.*, 1905, pp. 93–4.

[6] It must be stated that the excavations and records here referred to leave much to be desired in accuracy and completeness. The 'scale' drawing of this barrow, for example, does not tally with the measurements of its elements given in the text.


SECTION : LINE A-A′ ON PLAN
NORTH
SOUTH
129′
127′
125′
123′
125.5′
126′
126.5
127′
127.5
128′
128′
127.5
127′
126.5
126′
125.5
NOT EXCAVATED
TALUS
TALUS
POSITION OF LOST KERB
CAIRN RING ROBBED
WALL-FACE OF CAIRN RING
INTERSPACE, WITH CHAR-COALED FLOOR
TURF STACK
STONE-HEAP BASIN UNDER
TURF STACK
INTERSPACE, WITH CHAR-COALED FLOOR
WALL-FACE OF CAIRN RING
CAIRN RING ROBBED
KERB OF CAIRN RING
C.F. 1937
FOR EXPLANATION OF SYMBOLS USED SEE LARGE-SCALE SECTION
THE POND CAIRN
COITY HIGHER PARISH
GLAMORGAN
C.F. mens. et del. 1937
URN
BURIAL
CENTRAL PIT
EAST PIT
TURF STACK
INTERSPACE
CAIRN RING
A
A′
B
C
D
PLAN SYMBOLS:
STONES MARKING INNER AND OUTER FACES OF CAIRN RING
OUTLINE OF CENTRAL AND EAST STONE-HEAPS
FLOOR REDDENED BY FIRE
FLOOR COVERED WITH CHARCOAL
SITE OF URN (ADJACENT TO IT IS THE CHARCOALED BASIN)
AREAS NOT EXCAVATED
OUTLINE OF TURF STACK
THE HATCHED AREA REPRESENTS ROMANO-BRITISH HEARTHS
LETTERED LINES REFER TO DRAWN SECTIONS
CONTOURS AT 6" INTERVALS BY H.M.O.W.
125′
SCALE OF FEET: 0 10 20 30 40 50 60 66
10 9 8 7 6 5 4 3 2 1 0

Plan and Section of Pond Cairn, with contoured overprint and Romano-British hearths in *Red*

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recall that every prehistoric culture subsequent to the Megalithic in the Vale of Glamorgan which has been traced to its *proximate* source (e.g. the Beaker culture, *c.* 1800 B.C., and the Early Iron Age culture, *c.* 400 B.C.) has been located in south-west Britain, we are justified in emphasizing the probability that the men who buried their dead with novel rites in the margins of Simondston Cairn, and who constructed Pond Cairn, were settlers hailing from the other side of the Severn sea.[1]

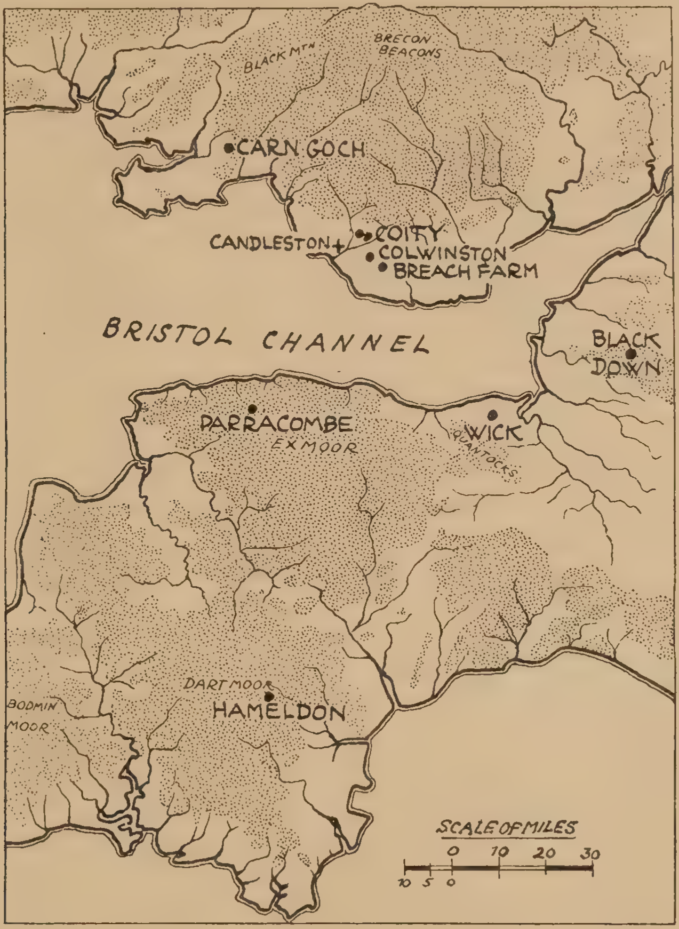
BLACK MTN
BRECON BEACONS
CARN GOCH
CANDLESTON
COITY
COLWINSTON
BREACH FARM
BRISTOL CHANNEL
BLACK DOWN
PARRACOMBE
EXMOOR
WICK
QUANTOCKS
DARTMOOR
HAMELDON
BODMIN MOOR
SCALE OF MILES
0 10 20 30
10 5 0

Fig. 8. Structures in SW. Britain related to the Coity cairns

We cannot say, as yet, at what stage in the evolution of Bronze Age ceramic the intrusion into the South Wales littoral took place. It seems to have been an important cultural movement, and as far as the Coity district is concerned, it is clear that the new-comers brought the collared urn into an area where the food-vessel was in a late stage of its prolonged evolution.

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[1] While this paper was in the press a valuable article by Stuart Piggott on 'The Early Bronze Age in Wessex', appeared in the *Proceedings of the Prehistoric Society* for 1938, pp. 52–106. This suggests that the burials under discussion may represent an extension into South Wales of a culture originating in Brittany and centred in Wessex.

It is not yet certain where the collared urn, this distinctly native type of pottery, was developed from the Neolithic B bowl; but the large number of early forms in Wiltshire and Dorset, and their associations, render Abercromby's view that the type 'apparently began in the area south of the Thames'[1] acceptable. The universality, then, of the type in Britain is something of a puzzle. Did its use spread from South England by peaceful means, representing merely a change of fashion in matters appertaining to burial? Or was it spread by conquest? Our text-books speak of the Middle Bronze Age in Britain generally as an age of peaceful development. This may well be doubted. Rapiers and spearheads were not ornaments but weapons; and we are at liberty to picture the ebb and flow of internecine strife as contributing largely to the uniformity which marks the Middle Bronze Age. At all events the Coity cairns have provided us with definite evidence of the spread of the collared urn culture into one particular area by the migration of family groups, or a tribe.

The discovery of wheat and barley grains is a valuable addition to our knowledge of the Bronze Age in South Wales. Records of food grains in such a context are extremely rare in this country. The only one that is well known represents an accidental occurrence. Three grains of wheat were found (still connected together in the husk) in the fractured core of a food-vessel in a barrow on the Yorkshire Wolds, accompanying an inhumation burial.[2]

What may be more to the purpose is the finding of a wheat grain in a round barrow with a cremated burial at Upton Pyne, near Exeter, Devon, in 1870.[3] For it is possible that the South Wales littoral received from Devon the first bread wheat to be grown thereon; Professor Percival identified the wheat found in Neolithic pits at Hembury,[4] the only Neolithic wheat as yet found in Britain, as probably *Triticum vulgare*—using almost the same qualified terms of identification as in the case of Pond Cairn.

Be this as it may, Pond Cairn provides what is probably the first scientifically controlled record of wheat for the Middle Bronze Age in England and Wales, and of barley for any period prior to the Early Iron Age.[5] The occurrence

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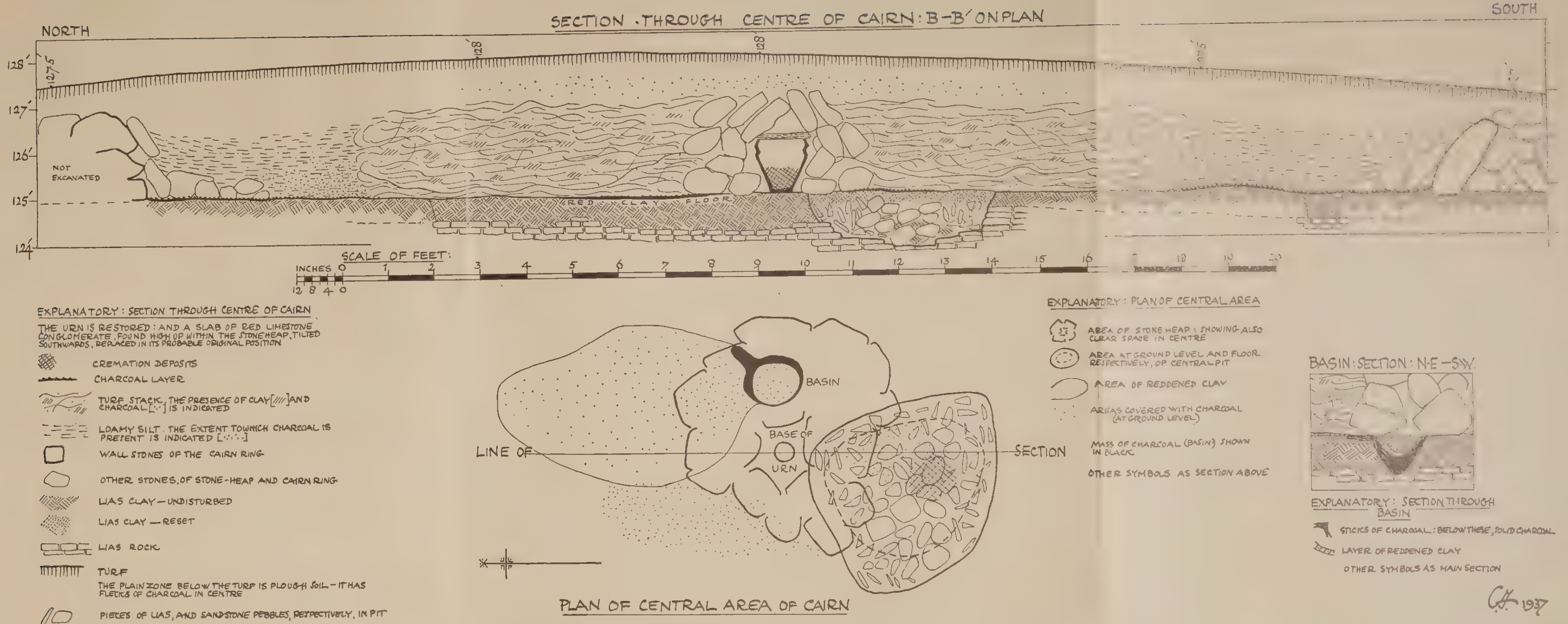
[1] *B.A.P.*, ii, 23.

[2] Mortimer, *Forty Years*, 111–12.

[3] *Trans. Devon Assoc.*, 1870–71, p. 646: 'We observed a grain of . . . wheat lying in the débris of the heap (of ashes and burnt bones).' 'Without doubt it found its way into the barrow when the mound was heaped up.'

[4] Liddell, *Hembury, Proc. Devon Arch. Explor. Soc.*, 3rd Report, 1932, p. 180.

[5] A study by E. Cecil Curwen of 'The Early Development of Agriculture in Britain' (*Proceedings of the Prehistoric Society*, 1938, pp. 27–51, esp. pp. 40–1), which appeared whilst this paper was in the press, should be consulted in this connexion.


SECTION THROUGH CENTRE OF CAIRN: B–B′ ON PLAN
NORTH
SOUTH
128′
127′
126′
125′
124′
127.5
128
128
NOT EXCAVATED
RED CLAY FLOOR
SCALE OF FEET:
INCHES 0
12 8 4 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 18 19 20
EXPLANATORY: SECTION THROUGH CENTRE OF CAIRN
THE URN IS RESTORED: AND A SLAB OF RED LIMESTONE CONGLOMERATE, FOUND HIGH UP WITHIN THE STONEHEAP, TILTED SOUTHWARDS, REPLACED IN ITS PROBABLE ORIGINAL POSITION
CREMATION DEPOSITS
CHARCOAL LAYER
TURF STACK, THE PRESENCE OF CLAY [////] AND CHARCOAL [∴] IS INDICATED
LOAMY SILT. THE EXTENT TO WHICH CHARCOAL IS PRESENT IS INDICATED [∴∵]
WALL STONES OF THE CAIRN RING
OTHER STONES, OF STONE-HEAP AND CAIRN RING
LIAS CLAY — UNDISTURBED
LIAS CLAY — RESET
LIAS ROCK
TURF
THE PLAIN ZONE BELOW THE TURF IS PLOUGH SOIL — IT HAS FLECKS OF CHARCOAL IN CENTRE
PIECES OF LIAS, AND SANDSTONE PEBBLES, RESPECTIVELY, IN PIT
BASIN
BASE OF URN
LINE OF
SECTION
PLAN OF CENTRAL AREA OF CAIRN
EXPLANATORY: PLAN OF CENTRAL AREA
AREA OF STONE HEAP: SHOWING ALSO CLEAR SPACE IN CENTRE
AREA AT GROUND LEVEL AND FLOOR RESPECTIVELY, OF CENTRAL PIT
AREA OF REDDENED CLAY
AREAS COVERED WITH CHARCOAL (AT GROUND LEVEL)
MASS OF CHARCOAL (BASIN) SHOWN IN BLACK
OTHER SYMBOLS AS SECTION ABOVE
BASIN: SECTION: N-E – S-W.
EXPLANATORY: SECTION THROUGH BASIN
STICKS OF CHARCOAL: BELOW THESE, SOLID CHARCOAL
LAYER OF REDDENED CLAY
OTHER SYMBOLS AS MAIN SECTION
C.F. 1937

Section (large scale) of central part of Cairn, B–B on plate LXV: also details (central area and basin)

Published by the Society of Antiquaries of London, 1938

of a 'weed of cultivation' with the food-grains vitalizes the record, enabling us to picture the little clearings fenced off from the domestic animals of the settlement; inadequately hoed, the tares and the wheat coming to maturity together, and gathered as one.

Of cognate importance is the determination by Mr. H. A. Hyde of the species represented in the fuel used for the pyres and other purposes connected with burial ritual in the two cairns. In addition to ash, oak, and mountain ash, hazel, hawthorn, gorse, and bracken were identified in the charcoals collected. After weighing the significance of the number of each species in relation to the total determinations (87 for Pond Cairn and 30 for Simondston), Mr. Hyde concludes that 'the use as firewood of so much gorse, bracken, hawthorn, and hazel, and comparatively so little oak and ash, probably indicates that locally at least the forest had already been destroyed and replaced by grassland and scrub'.

All the species are represented to-day in South Wales in areas partially cleared of woodland, especially hawthorn, gorse, and bracken; it is therefore easy to picture the Coity district as it was over three thousand years ago: an undulating area of what we here call 'rough pasture'—coarse grass with bracken and gorse clumps—interspersed with more dense patches of scrub containing woodland trees. That man and his grazing animals (who had been active in the area not less than four hundred years when Simondston Cairn was built, and hardly less than seven hundred at the time of the Pond Cairn burial) should have produced a general clearance of this character, in addition to the localized and more intensive clearing for corn-growing purposes, is not unexpected,[1] but its scientific demonstration is none the less valuable and important.

The discovery of coal and coke associated with wood charcoal in the secondary cremation (B 1) at Simondston by Dr. North provides a valuable *terminus a quo* for the use of coal as a fuel in South Wales. That the nearest outcrop is a mile and a half away is sufficient proof that its appearance in the ashes of the pyre was not accidental; rather, that its qualities were known and appreciated by the Bronze Age folk of the Vale.

The evidence obtained by this investigation—from Pond Cairn in particular—bearing on the environment, on the economic life and resources, on the movements, and on the beliefs and customs of Bronze Age folk in the west, is encouraging. Taken in conjunction with other recent investigations, it suggests that those of us who not long ago urged that it would be as well for some time to intermit field research on 'round barrows' except when it was enforced,[1] were wrong; the need was for an adequate technique, in which the co-operation of geologists, botanists, and other scientific workers should be arranged for. The investigation also suggests that, apart from its dating value, the cinerary urn may, in certain cases, be the least important discovery in a 'round barrow'.

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[1] The amount of such rough pasture in the Coity area would depend on the number of grazing animals, to whose activities the reduction of forest may be mainly attributed. The process is, I think, too gradual to be recognized by any one generation of men. See Fox, *Personality of Britain*, 3rd edition, p. 62.

APPENDIX I

Description of the Finds

Simondston Cairn

(a) *Pottery.* See figs. 3 and 4, and pls. XLVI and XLVII.

Food-vessel A 1 is a coarse badly baked conical vessel measuring as restored 9·3 in. in height, 11·9 to 12·1 in. in diameter at rim, and 4·65 in. at base. The rim is flat. The pot is thick-walled (average 18 mm.). Externally the ware has the usual pinkish-brown colour; with a black core, and some grit.

The upper part of the pot shows a typical food-vessel outline—a succession of four shallow hollows separated by low ridges; of these structural features the one at the rim is plain; the others are defined and emphasized by three rows of diagonal impressions, which occupy the hollows; these are sometimes parallel, sometimes arranged in herring-bone succession. The impressions vary considerably in length; many are as much as 20 mm., others 10 to 12 mm. In places they are so broad as to resemble maggot-pattern, in others the use of an angular tool is suggested. The decayed condition of the pot when recovered makes it difficult to describe the decoration accurately.[2]

Food-vessel A 2. This pot is similar to A 1, but is of coarser ware; its condition is even worse. It measures 9·2 in. in height (at present; the base is missing), 10·9 in. in diameter at the rim, and 4·4 in. at the base. Its rim is flat. It has a slightly more bulging outline than A 1, and shows three low ridges or cordons, separated by broad shallow hollows. These cover the upper two-thirds of the vessel. Unlike A 1 the hollows are undecorated; but the three ridges each show a close succession of notches made apparently with the point of the thumb or forefinger. The interior of this pot shows how it was built up by the potter with strips of clay, the joints of two such strips being shown in Mr. Grimes's sectional drawing (fig. 3, p. 132); but as the wall is incomplete it is not possible to tell whether the strips are attached spiral-wise or as separate rings.

Overhanging-rim urn B 1. The appearance of this urn as found (crushed and distorted, pl. XLVI) gave little indication of its character or quality. It was taken to pieces and reconstructed in the Department of Archaeology. Mr. Grimes points out that owing to the warping which the structure suffered, the reconstruction is but an approximation to its original form. This seems to me an over-cautious estimate of the position. Be that as it may, the urn now stands 14·4 in. in height (the floor of the base is missing) and is 12·0 in. broad at the rim. It is small-based (5·6 in. as restored) and in appearance slender. It is of better ware than either of the vessels associated with the primary burials. It is of the usual pinkish buff-colour externally, and, considering its size, the walls are thin (average 12 mm.).

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[1] *38th Congress of Arch. Soc.*, First Report Research Committee, 1931, p. 32.

[2] My colleague Mr. W. F. Grimes, who kindly prepared the sectional drawings, remarks: 'I suggest that the decoration may be finger- or thumb-nail impressions which have been dragged downwards over the pot. In some places (though rarely) the characteristic outline is distinct; in others an incised line in the bottom of the depression may be due to the finger-nail itself.'

It consists structurally of overhanging-rim or collar, neck and well-marked shoulder, and straight-sided conical body: the collar-form is of the early-middle phase in the sequence—that is, the best period, when its depth was proportionate to the other elements of the structure. Internally there is a broad (3 in.) slightly concave rim-moulding, which is characteristic of the type, and gives strength to the structure at a weak point (fig. 4, p. 137).

The collar shows externally a triple row of diagonal cord impressions, short and stubby. The neck (3 in. broad) is occupied by closely set thin incised lines more or less vertical, forming a pattern of acutely pointed triangles. Below this is a herring-bone pattern of cord impressions similar to those on the collar, on either side of, and close to, the angular shoulder.

The inside of the rim shows a rough-drawn, close-set, vertical zigzag pattern of thin incised lines, occasionally overlapping.

Sherds associated with the scattered cremation, B 3. The pottery consists of ten small fragments up to 2 in. in greatest diameter, apparently of one vessel. The ware is much better baked than that of the other three urns.

The material is insufficient in quantity to determine the dimensions of the urn; but four fragments illustrate its character. One shows six roughly parallel lines of impressed twisted thong pattern; while three are small portions of a plain projecting band or cordon. Three of these are figured (pl. XLVII, 2).

Such cordons may form an angular projection on the bulge of a biconical vessel; in this case the cordon represents the lower edge of the collar (overhanging-rim) from which the biconical type is derived, the true shoulder being lost. They also occur in 'cordoned urns' proper—vessels with two or more projecting bands round shoulder and body. These are normal highland-zone derivatives from the collared urn.

In either case impressed thong decoration would be normally met with, confined to a zone near the rim.

It can with confidence be stated that the urn represents a later burial than either A 1 and 2 or B 1.

(b) *Flint tools* (pl. XLVII, 1).

Flake knife. This knife is 70 mm. long by 35 mm. in greatest breadth. It is a flake of greyish flint, showing near the striking platform, and the base, part of the cortex. The knife is shaped up into an ogee form with a sharp point, by secondary pressure flaking on the ventral side. The blade is very sharp, the edges being slightly serrated. It does not appear to have been used. It resembles in outline a bronze blade of the second phase.

Fabricator. This ridged tool is a flake struck from the outside of a flint nodule, and it retains much of its cortex. It is 77 mm. long and 22 mm. in greatest breadth. It is patinated bluish-white, with a stone-grey patch in the centre of the flake surface. The tool is shaped up into a rod-like form by pressure—and resolved—flaking, the technique being coarser than in the case of the knife. At the upper end (on the plate) is a knob of cortex, smoothed and rounded by use. Thus both in form and character it justifies the description of fabricator.

Small flint tool, unstratified, near B 3 potsherds. A small point, leaf-shaped, with ridged back, of translucent flint with a cloudy bluish-white patination. It measures 22 mm. in length by 14 mm. in greatest breadth. The lower, flat, flake surface is untouched; the upper shows fine flaking all over.

(c) *Cup-marked stone* (pl. XLII, 2).

This measured 18·0 × 11·5 in. and was 6·0 to 6·5 in. thick. As pl. XLII shows there are five 'cups', the circular ones from 2·5 to 4·6 in. in diameter, the oval one 4·0 by 2·5. The largest cup is the deepest, 1·15 in. The cups are finely pecked, the surface of the stone round them more coarsely worked with a similar tool. The stone was squared up after the face had been worked. The freshness of the appearance of the work is remarkable; but it must be remembered that it was covered up on completion, and fully protected until a comparatively recent date when the coverstone of the cist was removed (see Appendix V).

Pond Cairn

(a) *Pottery.*

Overhanging-rim urn. The collapse in antiquity of the central stone-heap, raised round and over the urn, broke this vessel up. Since the urn was ill-baked, the consistency of its fragments came to be that of the surrounding soil; and the greater part of its structure was reduced to marble- and pea-sized lumps, largely through the action of worms which were numerous in the fine soil which penetrated the interstices of the stones. Sufficient fragments of the pottery of tolerable size were, however, secured to determine accurately the depth of the rim, the angle of the shoulder, and the form (concave) of the lower half of the urn: its height, and rim and base diameters, were fixed within a small margin of error.

The urn, as illustrated on pl. LXIV, was reconstructed in the Department of Archaeology of the Museum. It consists structurally of a markedly concave overhanging-rim or collar, neck and well-marked shoulder, and conical body with a pronounced double curve—convex in the upper part, concave in the lower. Internally there is the broad slightly concave rim-moulding, normal to the type.

The upper half of the urn—rim to shoulder—shows short, shallow, diagonal impressions, sometimes almost cuneiform, drawn with a blunt point. These form parallel though somewhat irregular rows on the rim; on the neck they are combined to form vertical zigzags, and the pattern finishes immediately below the shoulder. The inner moulding of the rim shows rows of similar impressions.

The surviving fragments show that the urn was very carefully wrought. The top of the rim is flattened, giving a rectangular section; the junction of rim and neck is sharp at the angle and smoothly rounded below. The thickness of the wall at the rim is 8 mm.; at the internal angle 13 mm.; and the body generally measures 10 mm. or less in thickness. The base is very thick and massive.

A comparison with the Simondston urn is interesting. The Pond urn is typologically more advanced as the ratio of rim depth to height shows,[1] and its pronounced and carefully smoothed curve suggests greater sophistication on the part of its makers. The ornament is more carefully wrought. The paste is finer and better fired, the surface in general much smoother and much more regular, and the colour is warmer (black to red and orange). In form, however, it is less attractive than the Simondston urn, being shorter and more squat.

The measurements of the two urns (in inches) are placed in parallel columns below:

	Simondston.	*Pond.*
Height	14·4	13·5
Breadth at rim	12·0	11·2
Breadth at base	5·6	5·7
Rim height	2·0*	2·1*
Rim and shoulder	4·8	4·9

* Average.

APPENDIX II

Report on the Osseous Remains, by L. F. Cowley, *Esq., M.Sc., Assistant Keeper, Department of Zoology, National Museum of Wales*

Simondston Cairn

The material from this site was extremely fragmentary; this was no doubt due in part to the effect of heat, since certain of the larger fragments showed the characteristic 'concentric' fractures which are so often found in bones which, prior to their having been placed in the burial urn, had been subjected to treatment by fire. This extreme fragmentation is very unfortunate since much information normally derived from length of bone and size of certain articular surfaces, concerning stature and sex, could not be ascertained. Moreover, the findings put forward in this report are based on a relatively small number of determinable fragments. To turn now to these, which are all human with the exception of one small tooth (incomplete and probably of dog), each item will be considered individually under the various headings which they carried when handed to me.

Bones from urns A 1 and A 2 in the central cist.

A 1. These remains, which were taken from the material contained in the urn A 1, are in my opinion those of one individual. At all events I have not found any trace of duplication of parts save in the petrous portion of the periotic bone; here, however, there was no duplication as such, but rather a pairing, since the fragments belonged one to the right and the other to the left side of the skull.

The weight of the whole of the osseous fragments from this part of the site was 2 lb. 11 oz.

In addition to the bones from the A 1 urn there were a few fragments obtained from around the base of the A 1 urn. These consisted of a few fragments of skull and portions of human teeth, and they weighed, together with other undeterminable fragments, 3 oz.

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[1] Pond urn, 1 : 6·4; Simondston, 1 : 7·2.

Furthermore, another batch of bones, weighing 11 oz., of which a few portions of teeth and a distal portion of a phalanx of a digit were identifiable, came from the south side of the cist and probably from A 1.

Altogether, therefore, the bones from the A 1 urn and also those in the immediate vicinity, which were probably of the same origin, had a total weight of 3 lb. 9 oz. The weight here given, and in each of the following items, is of the total fragments with some soil still adhering to them but quite dry. The material determinable from the two small batches just mentioned as probably belonging to that contained in the urn A 1, does not include any fresh evidence which would lead one to suppose that the A 1 urn had contained more than the remains of one individual.

The osseous remains from the urn A 2 indicate that more than one individual was represented. Certain of the teeth, some of which were almost complete, indicate that one of the individuals represented had been in possession of its permanent dentition, whereas another fragment, a portion of a palate and a small portion of lower jaw, was indicative of a person still in possession of the deciduous or milk teeth. In the material from this urn (A 2) we have evidence of the remains of two individuals, one mature and the other a juvenile. The weight of the bony fragments from urn A 2 was 3 lb. 4 oz. In addition to the foregoing, material was obtained (centre portion lower layer 7 in. above floor) which in all probability belonged to A 2 proper, and this material weighed 7 oz. Of this the material determinable yielded no information of any importance, neither was there any information forthcoming which conflicted with the findings based on the material from A 2 proper.

The total weight of A 2 including the last mentioned (7 oz.), which was probably of the same origin as A 2, was 3 lb. 11 oz.

Bones from secondary deposits.

B 1. The material without doubt represents three individuals: one, an adult, and the others juveniles. A portion of a palate indicates an adult, whereas two portions of the lower jaw, both of the symphysial region, indicate juveniles. The total weight of this material was 8 lb. 4 oz.

B 2. The material determinable from this part of the site belonged in my opinion to two individuals, an adult and a juvenile. This opinion is based on the findings of two petrous bones, both of the right side; one of these was much smaller and also more abraded than the other. This latter portion of bone suggests immaturity or, perhaps better, infancy. The total weight was 1 lb. 3 oz.

B 3. This consisted of about 2 oz. of material, and of this a few fragments of human teeth could be identified.

B 4 consisted of some 4 oz. of material, and of it a portion of tooth and a phalanx of a digit were determinable.

C 1. The most that can be said of the material under this head is that it yields but little information, but in all probability it represents but one individual. The total weight was 2 lb. 2 oz.

Conclusions. From the foregoing it will be seen that altogether the remains represent nine individuals of which four were juveniles. If we take B 3 and B 4 both as representing a separate burial then the total number rises to eleven individuals.

Note.—Central cist: burnt bone from upper layer, ground level to 7 in. This consisted of 1 to 2 oz. of material, and apart from a few fragments of teeth there was nothing determinable. This item has not been included in the above.

Pond Cairn

The material from this site was extremely fragmentary, consequently conclusions are based on a few small recognizable fragments. Each of the three sites has been treated as a separate unit. The weight of bone from each site has been included, but no allowance has been made for the adhering soil; weighings were made after the bones had been dried under normal (inside) conditions for a few weeks.

A. *Central pit.* The osseous material from this site consisted of several small portions of human skull and seven fragments of human teeth; and in addition one upper pre-molar tooth (unworn) which had not been calcined as had all the others. In addition there was a small portion of mandible (lower jaw) and a portion of the maxilla (upper jaw) of an infant. Neither of the jaws contained any teeth although the upper jaw showed plainly several alveoli. This portion of the upper jaw and also the unworn pre-molar tooth, already referred to, indicate immaturity, and in my opinion are remains of a child of under seven years. Weight $1\frac{1}{2}$ lb.

'Animal bone pointing downward between stones.' This consisted, in part at any rate, of a metatarsal or metacarpal of ox or red deer; whilst I cannot be certain I favour the view that it is a portion of the metatarsal of a red deer. The fragment which measures slightly less than 3 in. in length is incomplete in section, the front of the bone only being present. I see no evidence that this fragment had been artificially sharpened.

B. *Urn burial.* The material from this site represents, in my opinion, one adult. The skull was represented by several small bits of bone including two portions of maxilla, one of the right and one of the left side; each portion contained but one tooth. In addition there were thirteen separate human teeth and several fragments of digits. Certain of the above and also fragments of the long bones indicate an adult. Weight: $4\frac{1}{2}$ lb.

C. '*Basin.*' The recognizable fragments from this site consist of some nine portions of human teeth and of seven digits. In addition there was a portion of a molar tooth of sheep (or goat). Weight: 3 oz.

Note.—There appears to be no duplication in groups B and C; but material under C is of small amount relative to B.

APPENDIX III

Report on Seeds from the east pit, and from hearths, Pond Cairn,
by Professor John Percival, *M.A., Sc.D.*

I have now completed the examination of the larger sample of material you sent a few days ago, which came from your excavations of the Middle Bronze Age barrow at Bridgend, Glamorganshire, as well as the grains which you separated from the material.

As noted in my previous communication, I find:

(1) The seeds present in the barrow which you date in the Middle Bronze Age B

(*c.* 1300 B.C.) are grains of bread wheat (*Triticum vulgare*) or possibly club wheat (*T. compactum*), and caryopses or grains of the grass, cheat, or chess (*Bromus secalinus*), a common weed of cereal crops, abundant in ancient times, as now in some places. I found also two grains of barley in the material. The number of grains present is very small, scattered indiscriminately through the matrix, with no evidence of any kind of hoard. I found no signs of the grains having been subjected to fire.

(2) The grains separated from the material found on the Romano-British hearths A and B are all grains of barley.

(3) In the material from the hearth C, both bread wheat and barley grains are present, the latter being the more abundant.

I have placed typical unbroken specimens of the several grains in the specimen boxes you enclosed, and these I now return, with the material which you may need.

I am glad to have seen these interesting finds.

PS.—You will observe that in my previous letter I gathered that the wheat was the chief grain at hearth C; the grains which you had separated from this hearth, however, and enclosed with the last material you sent are all barley.

Supplementary Report to that made by Dr. John Percival upon the Cereals, etc., from Pond Cairn, by H. A. Hyde, *Esq., M.A., F.L.S.*

I washed out quantities of the various matrices (from the different parts of the cairn) from which grain had been found already, and obtained the following, in addition to those already recorded by Dr. Percival:

A. From hearth C: Chess (*Bromus secalinus*).
B. From hearth A/B: Wheat (*Triticum vulgare* or *T. compactum*).

I have examined microscopically a wheat grain from the east pit and have compared it with grains which I have charred by heat in the laboratory. I have found that the east pit grain displays greater distortion of internal structure than does a grain which has been carbonized at a relatively low temperature. I conclude, therefore, that carbonization in the Bronze Age grain was due to heat and not to slow spontaneous chemical change.

APPENDIX IV

Report on plant remains other than cereal grains from Pond Cairn, and on plant remains from Simondston Cairn, by H. A. Hyde, *Esq., M.A., F.L.S., Keeper, Department of Botany, National Museum of Wales*

A. *Pond Cairn*

1. *Introduction.*

The recognizable plant remains (other than cereal grains) consisted mainly of fragments of carbonized wood, all of which had apparently been brought to that condition by heat.

The specimens were examined under a Baker low-power binocular microscope, using objective no. 3 and eye-pieces no. 10 + 10·5 (joint magnification × 21). In most instances this first examination sufficed. Whenever necessary, however, the specimens were examined further, using a Beck 8 mm. objective and Spencer ×10 eye-piece combined with a simple vertical illuminator of the cover-glass reflector type: such features as the scalariform perforations in *Corylus* and the spiral thickenings in *Pyrus* were then easily observable.

In the list which follows, the details of provenance stated on the various containers are put in inverted commas. The names of the various tree and other species are stated, for brevity, in English (Latin names are given in a note later in the report). The figure in brackets following the plant name indicates the number of separate determinations of that species made in the particular batch in question. The nature of the material on which the determinations were made is then given: all specimens are wood unless otherwise stated. When three measurements are given they are respectively tangential width (perpendicular to the wood rays) × radial width (parallel with the wood rays) × length along the grain. Two measurements only are stated for stem fragments in the round, viz. diameter × length.

2. *List of determinations.*

A. *Material dated Middle Bronze Age, from primary deposits:*

THE 'EAST PIT'.

i. '*Larger pieces*' picked out of the greasy dark grey mass in the pit.

Oak (2). One flake of mature wood. One minute fragment.

Hazel (5). Three pieces ranging from 0·8 to 1·2 cm. across and 1·6 to 2·0 cm. long; one twig 0·5 × 2·0 cm.; one minute fragment.

Gorse (12). Seven twigs and stems ranging from 0·5 to 1·3 cm. diameter and 2·0 to 5·0 cm. long. One flake or chip. Four small irregular fragments.

Hawthorn (1). Stem 1·0 × 0·8 cm.

Bracken (3). Leaf stalks (portions of).

ii. '*Smaller pieces*' picked out of the dark grey mass.

Gorse (15). Flakes, twigs, and irregular fragments, all 1·0 cm. or less across and ranging from 1·0 to 2·5 cm. long.

Hazel (3). None over 1 cm. across.

Oak (1). 1·2 × 1·2 × 3·0 cm.

Other small fragments not examined microscopically may be presumed to belong to the above species.

iii. *Other pieces* picked out of the dark mass.

Mountain Ash (1). 1·0 × 0·5 × 1·7 cm.

Hazel (1). 1·2 × 0·6 × 2·0 cm.

Hawthorn (3). One stem 1·0 × 2·0 cm.; a small twig and a minute fragment.

Gorse (6). Four irregularly shaped fragments 1·0 cm. diameter or under, and 1·0 to 2·0 cm. long; two minute fragments.

Oak (3). Irregularly shaped fragments, one of them minute.

iv. *Charcoal and grey vegetable? matter from the pit.*

Gorse (5). Irregularly shaped fragments, three of them minute. This packet contained in addition fragmentary carbonaceous matter, none of which was determinable.

THE 'BASIN'.

'Charcoal sticks from the lining of this hollow, near the surface.'

Oak (12). The only specimens from this site which were examined microscopically: size varied from 0·2 to 2·7 cm. across by 1·8 to 3·0 cm. long. All were very uniform in appearance. Other precisely similar fragments in the packet may be presumed also to be oak.

THE 'INTERSPACE'.

'Charcoal from burnt layer inside cairn ring on the north side.'

Oak (11). Flakes and minute fragments. Ten other flakes from their macroscopic appearance may be presumed also to be oak. Many other similar flakes were left embedded in the earthy matrix.

Hawthorn (1). 0·8 × 0·7 × 1·0 cm.

Hazel (2). Minute fragments.

B. *Material dated second century A.D.; Romano-British:*

'Hearth A + B.'

Hazel (1): minute. No other charcoal here of any size or botanical significance.

'Hearth C': i.

Hazel. One minute fragment of nut shell.

Hawthorn (19). Four stem fragments 0·5 × 0·9 to 2·2 cm.; eleven fine twigs *c.* 0·3 cm. diameter; one flake or chip of wood and one flake of wood and bark; two stem spines 1 cm. long. In addition several other fine twigs were judged also to be hawthorn.

'Hearth C': ii.

Hawthorn (2). Washed out in the laboratory from a mass of earthy material containing grain.

3. *Notes on the species and their occurrence in the district.*

Bracken, *Pteridium aquilinum* (L.) Kuhn. A constant constituent of scrub and grass heath within the woodland zone in South Wales.

Gorse, *Ulex* sp. Two species occur in Glamorgan, viz. *U. europaeus* L. (Common Gorse) and *U. Gallii* Planch. (Autumn or Western Furze), both of which are common and abundant in Glamorgan. Their stem structures are identical and it is impossible to say whether one or both are here concerned. The wood of gorse could only be confused with that of broom (*Cytisus scoparius* (L.) Link.) which, however, has narrow bands of vessels in the summer wood while gorse has wide bands, a feature which shows clearly in the Pond Cairn material. The gnarled appearance of several pieces served also to confirm the identifications.

Hawthorn, *Crataegus monogyna* Jacq. The only species of *Crataegus* which occurs native in Wales. A very common constituent of scrub following woodland on all soils. For diagnostic characters see below under Mountain Ash.

Hazel, *Corylus Avellana* L. A very common constituent of woods on most soils. Many of the determinations were checked by observations under the higher power and confirmed by the presence of scalariform perforations on the vessel walls.

Pond Cairn. Summary of plant determinations.

	Bracken.	*Gorse.*	*Hawthorn.*	*Hazel.*	*Mt. Ash.*	*Oak.*	*Totals.*
A. *Middle Bronze Age*							
The East Pit:							
Filling (i)	3	12	1	5	—	2	23
„ (ii)	—	15	—	3	—	1	19
„ (iii)	—	6	3	1	1	3	14
„ (iv)	—	5	—	—	—	—	5
East Pit totals	3	38	4	9	1	6	61
The Interspace:							
Burnt layer	—	—	1	2	—	11	14
The Basin:							
Charcoal lining	—	—	—	—	—	12	12
Total M.B.A.	3	38	5	11	1	29	87
B. *Romano-British*							
Hearth A + B	—	—	—	1	—	—	1
„ C (i)	—	—	19	1	—	—	20
„ „ (ii)	—	—	2	—	—	—	2
Total R.-B.	—	—	21	2	—	—	23

Mountain Ash, *Pyrus aucuparia* (L.) Ehrh. The determination of woods belonging to the family *Rosaceae* (to which this species and Hawthorn both belong) is far from straightforward. The writer has made use of the features described by W. S. Jones (*Timbers and their identification*, Oxford, 1924), viz. in this species the presence of spiral thickenings on the vessels and tracheids, and the 1–3 seriate wood rays; and in hawthorn the almost complete absence of such thickenings, and the presence of 1–4 seriate wood rays. The hawthorn determinations (hearth C) were confirmed by the finding of at least two typical stem spines ('thorns').

Oak, *Quercus Robur* L. (Common Oak) and *Q. petraea* Liebl. (Durmast Oak) both occur in the neighbourhood; it is impossible to distinguish between them by means of their wood structure.

4. *Discussion*[1] *of the results.*

Neither bracken nor gorse appears to have been recorded previously from prehistoric sites of the Bronze Age or any earlier period. However, these and the other species found all occur in the area to-day and all might have been presumed to occur from before the Bronze Age; this confirmation is, however, of obvious interest and value.

It is impossible to say how many individual plants of any one species are represented in any one batch of material; but in view of the large numbers of one and the same species occurring in various batches, e.g. gorse (box N (ii)) and oak (boxes M and L) and hawthorn (hearth C), it seems likely that many separate determinations may in fact relate to few individual trees or bushes or only one. Hence it would hardly be safe to use the figures obtained as a basis for reconstructing a picture of local vegetation during the Middle Bronze Age.[1] At the same time the use as fire-wood of so much gorse, bracken, hawthorn, and hazel, in comparison with oak and ash, probably indicates that locally at least the forest had already been destroyed and replaced by grassland and scrub; indeed on the botanical side no such direct evidence of early deforestation seems previously to have been published. The evidence from the Romano-British hearths, though scanty, is consistent with the same hypothesis.

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[1] This covers also the botanical results of the Simondston excavation described on next page.

B. *Simondston Cairn*

The recognizable plant remains consisted entirely of fragments of carbonized wood. For preliminary explanation see report on similar material from Pond Cairn.

Charcoal round base of Urn A 1 in cist. Mountain ash: three fragments, none more than 1 cm. in any direction.

Charcoal from B 1 Cremation area. A large number of samples of charcoal and matrix were taken from the extensive cremation area known as 'B 1', from both inside and outside the urn. From one sample external to the urn, oak (2 fragments) and ash (2 fragments) all very minute were extracted from the bulk of indeterminate material. Three other batches were examined; these appear to me to differ in accidentals such as degree of comminution of the fragments and nature of matrix rather than in the characters of the wood as such. All fragments without exception came from mature trees having a normal rate of growth: they might well all have been part of the same tree. The three batches were as follows:

(i) 'Inside urn.' Over 100 small pieces, mostly flat more or less rectangular flakes, very few more than 1 cm. long and none over 1 cm. across. Actual determinations: 4.

(ii) 'Inside urn.' Forty to fifty pieces embedded in lumps of coarse earthy material. Of the *three* specimens taken at random one approached 1 cm. measured tangentially: the others were flat flakes.

(iii) 'Outside urn.' A solid mass of earth material 25 × 16 × 8 cm. in size and containing very numerous pieces of charcoal, some of them 3 to 4 cm. long. Actual determinations: 3.

Thus oak predominated heavily in the material for this pyre.

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[1] In order to obtain first-hand information on the native woodland vegetation of the neigbourhood a rough transect was made through Coed y Morfa, a small wood on the northern slope of Brackla Hill (Lower Lias Limestone) and within half a mile of Pond Cairn. The wood was found to have been felled some years previously and replanted with spruce (*Picea Abies* Karsten). The natural growth had not, however, been kept in check, and the wood is now fast reverting to ash-wood, the spruce trees being almost suppressed. At present birch (*Betula* spp.) is as abundant as ash, but is being out-distanced by it and will probably become quite subordinate to it. Other associated species include wych elm (*Ulmus glabra* Huds.), hazel (*Corylus Avellana* L.), oak (*Quercus* sp., one sapling only), maple (*Acer campestre* L.), hawthorn (*Crataegus monogyna* Jacq.), and goat willow (*Salix caprea* L.). Woodland with a preponderance of ash is, therefore, the natural growth on the Lower Lias hereabouts. The extreme paucity of the Pond and Simondston Cairn charcoals in ash points inevitably, I think (as suggested in the body of the report), to extensive local deforestation prior to the date of the cairns.

Charcoal, Cremation C 1. Oak: three fragments, one 1·3 cm. long, the others minute.

Charcoal, Cremation B 4. (*a*) Black material embedded in an earthy matrix. Structure too obscure for any determination to be made.

(*b*) Ash: seven fragments, two only exceeding 1 cm. in diameter, the remainder mostly much smaller.

Hazel: three, all minute.

Other fragments of similar microscopic appearance.

Charcoal, Trias Slab E. Various small fragments, all too imperfectly preserved for determination.

Charcoal, Trias Slab G. Oak: probably one minute fragment—too small for certainty. Also two pieces of carbonaceous matter, possibly of plant origin, but their structure very incompletely preserved and indeterminable.

Charcoal, Thrust-block II. A few carbonaceous fragments embedded in earth: none determinable.

Tabular list of plant remains (*Simondston Cairn*).

	Ash.	*Hazel.*	*Oak.*	*Mt. Ash.*	*Totals.*
A 1	—	—	—	3	3
B 1	2	—	12	—	14
B 4 (a)	—	—	—	—	—
„ (b)	7	3	—	—	10
C 1	—	—	3	—	3
Trias E	—	—	—	—	—
Trias G	—	—	? 1	—	? 1
Thrust-block II	—	—	—	—	—
Totals	9	3	15* (? + 1)	3	30 (? + 1)

Summary. 30 wood fragments in all were identified as follows:—

Ash (*Fraxinus excelsior* L.)	9
Hazel (*Corylus Avellana* L.)	3
Oak (*Quercus* sp.)	15*
Mountain Ash (*Pyrus aucuparia*)	3

* This number represents only actual determinations made under the microscope, and has, therefore, only a token value: the B 1 material must have contained 200 oak fragments at least. It should be re-emphasized that, in view of the considerations mentioned in the text of this Report and in that on the charcoals from Pond Cairn, the figures cannot be used as a basis for estimating the number of individual plants concerned.

Conclusions. In view of the comparatively small quantity of material involved, the results appear to be consistent with the hypothesis stated in the *Report* on plant remains from Pond Cairn (q.v.).[1]

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[1] It is assumed that the Simondston Cairn material is all of Bronze Age date.

APPENDIX V

Report upon the Geology of the Cairns and their contents, by Dr. F. J. North, *F.G.S., Keeper, Department of Geology, National Museum of Wales*

Simondston Cairn

The structure. Six kinds of rock are represented on the site—two kinds of limestone of Liassic age, sandstone of Rhaetic age, and three kinds of conglomeratic limestone of Triassic age. All of these occur in the neighbourhood.

The rock-floor of the site is compact argillaceous limestone of Liassic age, but most of the material used in the construction of the cists and the cairn is sandstone of Rhaetic age, the outcrop of which approaches within 250 yards of the site on the east. It forms a feature that, before the construction of the road from Llantrisant to Coity which here follows the Rhaetic outcrop, must have been more conspicuous than it is now.

The blocks of sandstone—the large slabs used in making the central cist, as well as the smaller blocks of the cairn, were all quarried from a weathered outcrop, and the natural planes of weathering in the rock are such that the blocks could all have been removed and broken by means of wedges. The only treatment which the blocks received was the removal of partially loosened flakes; there was no trimming by means of tools.

In connexion with the secondary burial area, a slab of shelly limestone of Liassic age was used, and a few small pieces of similar rock were scattered among the general debris. This kind of rock occurs at the local base of the Lias, and there is an outcrop about 300 yards away to the south-east of the site.

Two large slabs (E and G), covering holes excavated to the rock floor, and the slabs D and F were of thickly bedded conglomeratic marl, red in colour and of Triassic age, while other slabs that were associated with certain thrust-blocks on the south side and the west side of the cairn were of a hard, thinly bedded, limestone conglomerate, also red in colour, and of Triassic age. Both the red varieties of Trias occur near Coity, the nearest exposures to the site being about half-a-mile away in a north-north-easterly direction.

Greyish limestone conglomerate of Triassic age was found near another thrust-block,[1] and in this case, also, a few small lumps occurred among the general debris. This rock outcrops about 500 yards east-north-east of the site, on the slopes leading to a stream that flows into the Ewenny river.

There was no trace among the stones of the cairn of any extraneous glacially transported material such as is represented by the small curved flake of Old Red Sandstone that was found in the B 1 layer.

All the stones used by the builders of the cairn came from the east side of the site. The blocks used for the principal cist, and for the bulk of the mound, were of one kind of rock, of extremely local origin, while the blocks of shelly Lias and of Triassic conglomerate were obtained from slightly greater distances.

The cupped slab of the cist. This is a block of Rhaetic sandstone, similar to that used in the remaining portion of the cist, but it would appear that an attempt had been made to 'square-up' the mass by pecking, followed by friction. A lump of the same kind of stone would serve as an abrasive, because the grains are loosely cemented, and easily removed. The process seems only to have been fully carried out on one long side. Neither the shape nor the distribution of the circular hollows can be attributed to any natural processes, and owing to the friable nature of the stone, the pitting which now characterizes the surface of the hollows, and the excavation of the hollows themselves, could easily have been effected by means of a pointed lump of flint held in the hand.

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[1] See footnote 2, p. 135.

Cup-shaped object from the cist. This is the outer weathered crust of a nodule of marcasite derived from the Chalk. It now consists of the hydrated oxide of iron known as limonite, and its present hollow form is due to the decomposition and removal of the marcasite from the interior of one-half of a round nodule; a crust of limonite due to oxidation had been formed before the nodule was broken, and this was sufficiently durable to remain intact while the remainder of the marcasite decomposed and was removed.

The regular character of the interior, and the absence of decomposition products in the adjacent clay, indicates that *the development of the cup-like character had been effected before burial,* and the final cleaning-out is not likely to have been due to natural causes.

There can be little doubt that the cup-like object was brought from a locality in which chalk occurs. Such nodules cannot have been obtained from the rocks of Glamorgan, and cannot have been transported thither by natural agencies.

Two flint tools from the cist. These have been fashioned from flint that had been isolated by weathering from the Chalk, and not from a water-worn nodule of flint such as those found among the beach materials along the South Wales coast.

Curved flake of red sandstone (*B I cremation area*). This is a fragment of Old Red Sandstone and it owes its shape to the effect of heating and quenching. The rock resembles certain of the beds of the Old Red Sandstone that occur to the north of the South Wales coalfield. It is presumably derived from a glacially transported boulder that formed part of a hearth or 'fire place'. Boulders of this Sandstone are by no means common in the neighbourhood of Brackla Hill.

Fuel associated with the burnt clay (*B I cremation area*). Most of the larger black fragments associated with the burnt clay and burnt bones were of charcoal, but there were also four fragments of unburnt coal and about a dozen small pieces of coke. Careful inquiry was made to ascertain whether the coal and coke could have been of extraneous origin, but there was no indication of any possible source of contamination; moreover, one piece of clay from the margin of the cremation material (B I layer) contained a fragment of coal, together with a fragment of burnt bone and some burnt clay.

Although the fragments of coal and coke were small, none of them being more than $\frac{3}{8}$ in. in diameter, and were comparatively rare, it seems impossible to avoid the conclusion that coal was present in the fuel used for the cremation. With a view to confirming this conclusion, some of the clay of the cremation layer was disintegrated, and the fine carbonaceous material (in fragments of $\frac{1}{16}$ in. or less in diameter) was separated by means of a liquid of high specific gravity (bromoform diluted with benzine), and the material thus separated was further subdivided on the basis of specific gravity into two portions, one slightly heavier than the other.

When crushed and examined under the microscope it was found that, while the material of the lighter portion contained a good deal of charcoal, recognizable by the acicular character of its finest particles (compare photographs A and B, pl. XLVIII), the material of the heavier portion contained no charcoal, but was closely similar in appearance to the finely comminuted coke obtained by crushing one of the larger particles picked out of the debris (see photographs C and D).

That coal should be represented in the fuel in such small quantity is as striking as that it should be present at all. As far as can be determined from the small quantity available, the unburnt coal resembles the coal which occurs along the southern margin of the South Wales coalfield, the nearest exposures being about one and a half miles northwards of the site of the burial place.

Pond Cairn

The majority of the stones of the cairn were blocks of sandstone of Rhaetic age, and of immediately local origin. They were not quarried blocks, but seem to have been gathered from the surface of a weathered outcrop—such an outcrop has been exposed a little to the south of the site where a small tributary of the Ogmore river has cut completely through the Lias and the rock upon which the cairn is situated. There were, in addition (*a*) a few blocks of shelly Lias limestone, and (*b*) numerous more or less rounded boulders of sandstone of Upper Carboniferous age, no doubt material that had been transported by fluvio-glacial activity down the valley of the Ogmore and left stranded upon the surface in the vicinity. Of doubtful provenance was a block of ferruginous dolomite, or iron ore, derived from the Carboniferous Limestone.

The material used by the builders of the cairn contrasted strongly with that used in the Simondston Cairn, in that, whereas in the latter quarried blocks had been used, the stones of the Pond Cairn were surface gatherings.

Two stones call for special note :

(*a*) A thin slab, about 12 in. by 10 in., of red Triassic conglomerate (placed over the urn in the primary burial). It was like the thinly bedded variety of Triassic conglomerate used in the Simondston Cairn.

(*b*) A slab, about 12 in. by 8 in. (from the east pit), of shelly Liassic limestone resembling the shelly Lias, of which a much larger slab was used in the Simondston Cairn.

There can be little doubt that both these stones were derived from the same outcrops as were the corresponding stones in the other cairn.

Flint chips. Eight were submitted. One from the fire-hole above the east pit was derived from a mass that had been burnt; another from the floor within the cairn ring was unburnt. Of the rest, all unstratified, four were unburnt and two burnt.

Flint flake. A flint flake, from the central pit, was unburnt.

Note on the map (*fig. 2*). The symbols on this map indicate the areas from which the principal types of stone mentioned in my reports on the Simondston Cairn and the Pond Cairn were obtained.

VI.—*Notes on Early Coptic Sculpture*

By Ernst Kitzinger

Read 20th January 1938

Complete agreement has not yet been reached among students as to the part played by Egypt in the history of Early Christian and Early Byzantine art. There are two problems around which discussion has chiefly centred. The first concerns Alexandria. Some authorities believe that this town remained a stronghold of Hellenistic art throughout the Christian period, and that it maintained the highest classical standard at a time when most of the Mediterranean countries were already submerged in what are commonly called the Dark Ages.[1] This theory has, however, been contested by other writers who think that Alexandrian art sank as early as the fifth century to the level of provincialism, and that from that time onwards Constantinople was the chief centre in which the classical tradition was preserved.[2]

The second problem concerns the art which grew up in the Nile Valley during the Early Christian centuries, and which is commonly called Coptic. According to one theory, or rather group of theories, for there are various differences of opinion within the main contention, this art owes its existence to some sort of violent reaction on the part of an always anti-Hellenic hinterland against the Greek tradition of Alexandria; a reaction drawing its inspiration from the unexhausted resources of the Orient. Either the tradition of the Pharaonic art of Egypt itself is held responsible for it,[3] or influences from beyond the Sinai, from Syria, Mesopotamia, or even from India.[4] Others, however, hold that Coptic art is really nothing but a highly provincial derivative of Hellenistic art.

A true valuation of the historic role of Early Christian art in Egypt obviously depends on the solution found for these two problems. If classical beauty and skill were still alive as late as the sixth and seventh century at Alexandria, it may be considered as an important source of the Byzantine 'Renaissance' of the ensuing period. Otherwise Alexandria can only be regarded as a mere backwater of Byzantium. The Coptic hinterland, on the other hand, may either have been a breach through which the ancient Orient invaded the sphere of Graeco-Roman art or it may have been a comparatively unimportant border province of the Mediterranean world.

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[1] Cf. especially the numerous papers published by the Princeton School, foremost among them C. R. Morey, 'The Sources of Medieval Style', *Art Bulletin*, vii, pp. 35 ff. (see especially pp. 39 ff.), and 'Notes on East Christian Miniatures', *Art Bulletin*, xi, pp. 1 ff.

[2] Cf., e.g., E. Weigand, *Kritische Berichte zur kunstgeschichtlichen Literatur*, vols. 3 and 4, 1930–1 and 1931–2, pp. 43 f.

[3] Cf., e.g., Strzygowski, *Catalogue Général des Antiquités égyptiennes du Musée du Caire, Koptische Kunst*, 1904, Introduction.

[4] This is for instance the view of U. Monneret de Villard (*La scultura ad Ahnas*, 1923, *passim*). Cf. also a recent paper by F. Drioton, 'art syrien et art copte', *Bulletin de l'Association des Amis de l'Art Copte*, iii, 1937, pp. 29 ff.

Now these two problems are closely interrelated with each other. The more proof there is for an uninterrupted Hellenistic tradition in Alexandria, the more independent the Coptic art of the hinterland will appear to be. On the other hand, the more Coptic art is linked up with Hellenism and not with the Orient, the more difficult it will be to represent Alexandrian art as something existing independently but concurrently. One way of approaching these questions would be to try to establish the facts about Alexandrian art and to see whether there is evidence for its having been an active centre of Hellenistic taste in Christian times. But even the most ardent defenders of this theory admit that works of art which can be definitely connected with Christian Alexandria are very rare and in any case insufficient to make a coherent story. It seems more promising to direct our inquiries first to the Coptic art of the hinterland, where there is a great quantity of material spread over all the centuries of the Christian era, and to try to establish its true character and its historic significance. To do this two questions must be answered: (1) When did a local Coptic style first emerge? (2) What are its sources? Not until these two questions have been settled can we proceed to consider the problem of Alexandrian art by asking whether there is any evidence of an independent and more Hellenistic tradition having survived in Egypt side by side with the Coptic style. It is as a contribution towards a settlement of these questions that the following notes are offered.

For several reasons sculpture has been chosen as the subject of this inquiry; the monuments are very numerous, their provenance is often certain, and above all, they offer more opportunity for comparisons with objects in other and better-known parts of the Mediterranean, than do painting, textiles, or the minor arts. This is of course a great advantage since the position of Egypt in relation to the other early Byzantine schools is an integral part of our problem. Our interest will naturally be focused on the earlier period of Coptic sculpture, for in it we witness the genesis of that style whose real character we hope to determine. It is my purpose to deal first with the chronology of the sculpture, then with its stylistic sources, and lastly with its relationship to Alexandrian art.

I. *The Chronology of Early Coptic Sculpture*

Every analysis of early Coptic sculpture must be based on the rich finds made by Naville at Ahnas, the site of the ancient town of Heracleopolis.[1] These form a well-defined group which is generally regarded as the earliest among the sculptures of local and distinctly Coptic style. Many more sculptures which bear more or less obviously the characteristics of this group appeared after Naville's time as a result of casual excavation. Their provenance is not always absolutely certain. But since the bulk of the material is known to have come from the site of Heracleopolis we are justified in speaking of an Ahnas group and an Ahnas style.

The comparatively early date of this group is proved not only by the fact that they include many figure subjects of obviously pagan Greek character, but also because they are less developed in style than most of the carvings found on other sites (see below, pp. 189 ff.).

It is not my intention to give a catalogue of the sculptures from Ahnas and an account of the site from which they come. This will be found in a monograph by Monneret de Villard.[2] It may, however, be useful to mention briefly the sculptures from the same site which have come to light since Monneret de Villard's book was published:

In the Egyptian Museum, Cairo:

Female head surrounded with foliage (no. 49660; cf. pl. LXXIV, 7).
Foliage frieze with animals (no. 20-1-34-3; cf. pl. LXXI, 4).

In the Coptic Museum, Old Cairo:

Figure group and foliage (no. 3558; cf. pl. LXXIII, 7).[3]
Foliage frieze with figure of woman (no. 3559).
Fragment of female figure (no. 3586).[4]
Fragment of gable with woman and peacock (no. 3808).
Fragment of Corinthian capital (no. 3941).
Foliage frieze with animals (no. 3584).
Foliage frieze with animals (no. 3812).
A pilaster capital with a flying angel holding two wreaths (no. 168), although of uncertain provenance, may be attributed to the Ahnas group for stylistic reasons.

To determine the exact date of the sculptures from Ahnas is a matter of considerable difficulty. No conclusions can be drawn from the site and the circumstances in which they were found. Indications of their date must therefore be derived from the carvings themselves.

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[1] E. Naville, *Ahnas el Medineh, 11th Memoir of the Egypt Exploration Fund*, 1894, pp. 32 ff., pl. XIV ff.

[2] *Loc. cit.*, pp. 29 ff.

[3] M. H. Simaika Pacha, *Guide Sommaire du Musée Copte*, 1937, p. 14, pl. XXXIII.

[4] M. H. Simaika Pacha, *loc. cit.*, p. 13, pl. XXXII.

Some of them are merely architectural ornaments such as foliate friezes, capitals and niches. The majority, however, show figure work in an ornamental setting. Among these figure sculptures two groups may be distinguished which are different both in figure style and ornamental motifs, and of these the two carvings on pl. LXVII are typical specimens. The first group is very well defined. It is clearly represented by four gables in Cairo Museum all of which show in a most outspoken manner the typical Coptic figures with their clumsy proportions and angular movements, sharply cut forms and deep shadows. Common to these four carvings is a hybrid architectural framework only remotely reminiscent of a classical pediment, and a highly stylized ornament of intertwined foliage.[1]

The other group is distinguished by a somewhat softer and more fleshy figure style and by purer architectural forms, among which the classical semicircular niche occurs several times. While the intertwined foliage is hardly ever found in this group, there is a variety of classical ornaments such as the egg-and-dart motif and consoles.[2]

The demarcation between the two groups is, however, by no means clear. There are many carvings of a style transitional between the 'soft' and the 'hard' one, and since the figures are always of fundamentally the same type one may assume that the soft group only represents a slightly earlier stage in the development of a single local school, a stage not yet so remote from classical standards. This local school must have been at work continuously for some time.

The first and very general clue as to the date of these sculptures is afforded by their figure subjects. In both groups the majority of these are taken from Greek mythology. But there is also in each group one definitely Christian representation.[3] Both groups must therefore date from a period when Christianity was already officially recognized and paganism had not yet died out, that is to say, from a time between the fourth and the sixth centuries. Within these wide limits the chronology of Ahnas is not certain. Monneret de Villard assigns the Christian gable in Cairo Museum (no. 45942), and with it the majority of the carvings of the 'soft' group, to a date not earlier than the second half of the fourth century,[4] while for the 'hard' group, whose more advanced character is rightly pointed out by him, a fifth-century date is suggested. The arguments on which this chronology is based are, however, somewhat weak. An attempt will here be made to supplement them and to confirm the hypothesis.

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[1] G. Duthuit, *La Sculpture copte*, 1931, pls. XIV, XVI *b*, XX *c*, XXI (see our pl. LXVII, 1, pl. LXVIII, 5, and pl. LXX, 4).

[2] Typical specimens are: G. Duthuit, *loc. cit.*, pl. XVII *b*, XXXII *a*, *b* (see our pl. LXVII, 2).

[3] In the 'soft' group a gable in Cairo Museum, no. 45942 (Duthuit, *loc. cit.*, pl. XIII *b*). In the 'hard' group the gable no. 7285 (our pl. LXVII, 1). On both of these is a cross flanked by figures.

[4] *Loc. cit.*, p. 61. On p. 66, on the other hand, he allows himself a wider limit for this group.

The figure style of these Coptic carvings is so peculiar that it almost defies comparison, and Monneret de Villard was certainly right to establish his chronology chiefly on the evidence of the ornament. But he himself points out that the ornament in the 'soft' group, particularly the egg-and-dart motif, is of such a common type that it cannot be dated with any exactitude. On the other hand the intertwined foliage motif which we found to be typical of the 'hard' group, although very frequent in Coptic Egypt, is never found on dated monuments. It is true that it occurs very often in the monasteries of Bawit and Saqqara, but this fact is by no means so certain a proof of a fifth-century date for the Ahnas carvings as Monneret de Villard would have us believe. He himself says (p. 57) that the scanty information available about these monasteries is not sufficient to date their existing remains with any certainty. The majority of the decorative carvings from these sites, in fact, belong most probably to the sixth century.[1] Moreover, most of the intertwined foliage friezes at Bawit and Saqqara are rather different in execution, the leaves are much shorter, not so sharply pointed, nor so elegantly curved as on the gables from Ahnas.[2]

Foliage precisely similar to that on these gables is, however, found on some capitals which also come from Ahnas, and must have belonged to the same, or at least a similar, architectural context. Here we find the very elongated, sharply and deeply undercut forms of the foliage with which the gables of our 'hard' group are decorated (cf. pl. LXVIII, 4 and 5). It is therefore safe to conclude that the date of the gables is more or less accurately determined by the date of these capitals.

Monneret de Villard, who did not recognize the immediate connexion between the foliage on the capitals and that on the gables, has assigned these particular capitals to a date late in the fourth century.[3] But his arguments are not conclusive. Again he makes a comparison with carvings from Bawit and Saqqara which are, however, different in style and later in date.[4] The same applies to his comparison of the figures of flying putti on one of these capitals[5] with the somewhat similar figures on the wooden door of St. Barbara in Old Cairo. These are not so closely related in style as to be necessarily of the same date. Moreover, the door of St. Barbara is certainly not of the fourth century.[6]

Since the foliate capitals from Ahnas are so far the only possible clue to the date of the Ahnas figures, a new attempt must be made to fix their period as exactly as possible. This can only be done by ascertaining their position in the history of the acanthus capital in late antique and Early Christian art.

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[1] Cf. below, p. 190. [2] Cf. below, pp. 190 f. [3] *Loc. cit.*, p. 58. [4] Cf. below, pp. 189 f.

[5] Cairo Museum, no. 44069, Duthuit, *loc. cit.*, pl. XLIII *a*. [6] Cf. below, p. 212.

A fairly large literature has been devoted to this subject during the last twenty years or so. Although there are still a number of open questions, almost universal agreement has been reached with regard to certain fundamental points. We know that during the fourth and the fifth centuries the classical acanthus capital gradually disintegrated.[1] As far as Egypt is concerned this process is well illustrated by a great number of capitals from the Menas Basilica, as well as by many others now scattered over the mosques and museums of Cairo. A full analysis of these capitals to which a special chapter is devoted in Professor Kautzsch's recent and comprehensive study of the capitals of the late antique period,[2] cannot be given in the present paper. It must suffice to mention a few points characteristic of the general process, and at the same time relevant to the problem immediately before us:

(1) The disintegration of the upper zone of the capital: Some elements such as the inner volutes or the sheath-leaves (*Hüllblätter*) are frequently omitted; the proportion between the volute zone and the ring of leaves is apt to change more and more in favour of the latter, so that an increasingly large part of the volutes is covered by the leaves.

(2) Transformation of the acanthus leaves: The tips of the leaves which had been directed steeply upwards in the classical capital are more and more spread out like the ribs of a fan. The number of tips in every lobe is often reduced from four to three. The outlines of the leaves lose much of their softness, the tips are more and more sharply cut and become spiky. Generally speaking, the acanthus loses much of its natural character.

(3) There is consequently a tendency to transform the foliage ring into an abstract pattern no longer detachable from the main body of the capital. Every leaf is surrounded by deep shadows which make its shape appear more rigid and less organic. The forms of the shadows are apt to repeat themselves so that leaves and background begin to form an abstract design.

This is the trend of the general development. But unfortunately the Egyptian material does not allow us to arrive at an absolute chronology. In Palestine and Constantinople, however, we witness an evolution on much the same lines, and in these regions a few fixed dates are available. Of course the process is not so simple and straightforward that all its symptoms could be found in every capital of the period. But the examples on pl. LXVIII, 3, 6, 7, and 8 at least illustrate some of the most characteristic changes, and they have the advantage of being more or less closely datable. A comparison between pl. LXVIII, 3, 7, and 8 illustrates the transformation of the naturalistic foliage chalice to a

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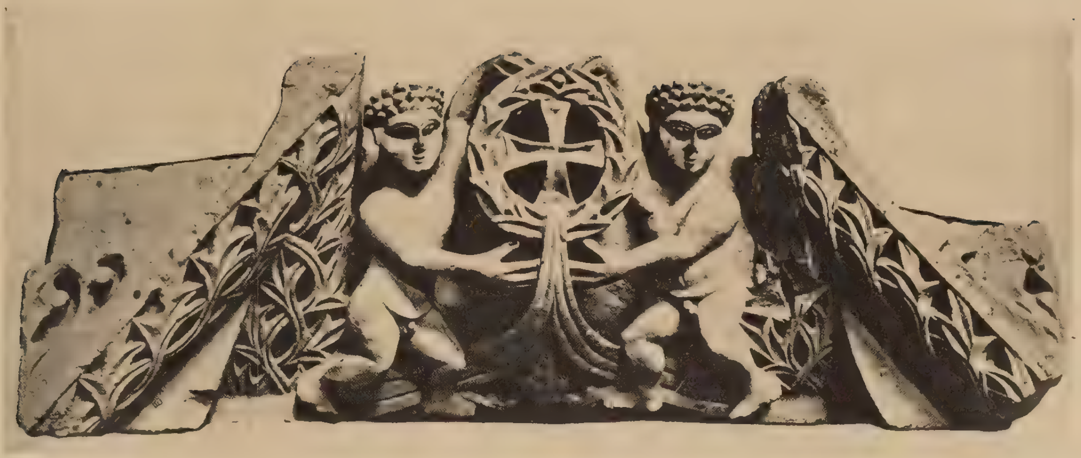
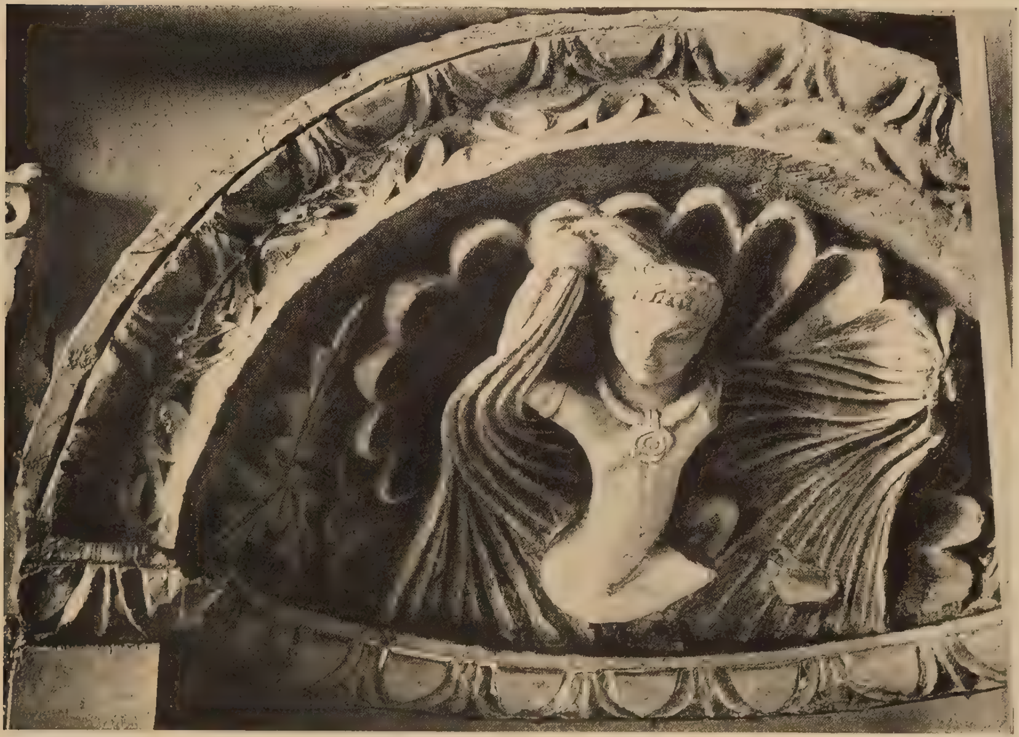
[1] E. Weigand, *Athenische Mitteilungen*, 1914, pp. 23 ff.; and *Byzantinische Zeitschrift*, 1914–19, pp. 193 ff.; R. Kautzsch, *Kapitellstudien*, 1936, *passim*.

[2] *Loc. cit.*, pp. 24 ff.



1. Niche: two putti and cross. Egyptian Museum, Cairo, no. 7285



2. Niche: birth of Venus. Egyptian Museum, Cairo, no. 44068

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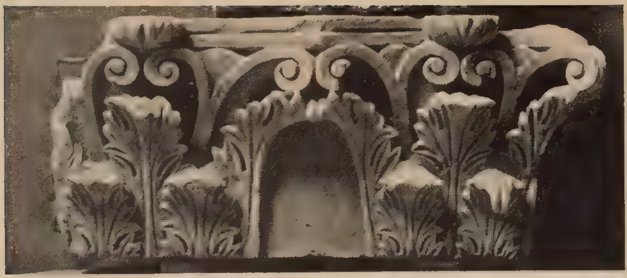
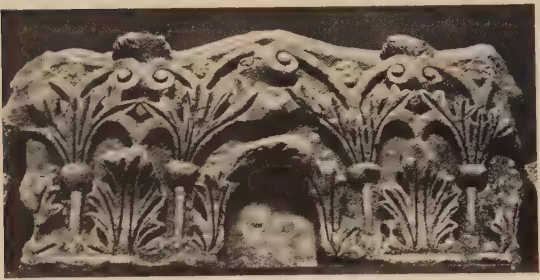
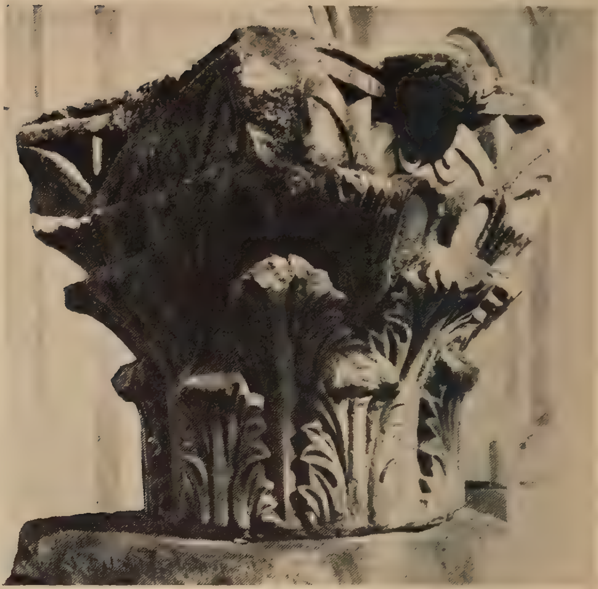


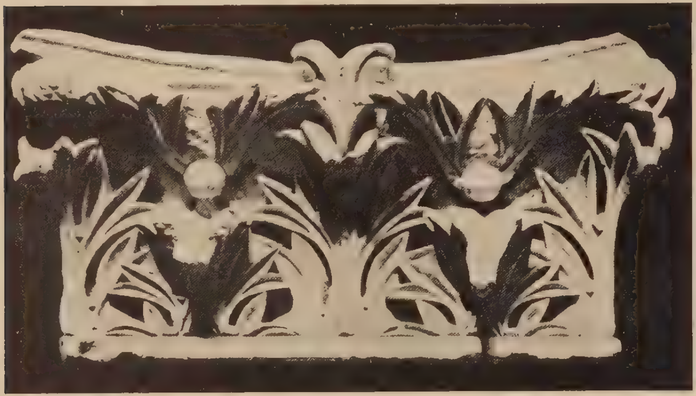
1. Capital from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



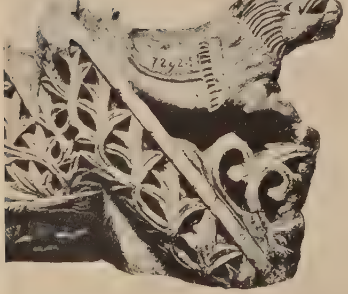
2. Capital from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



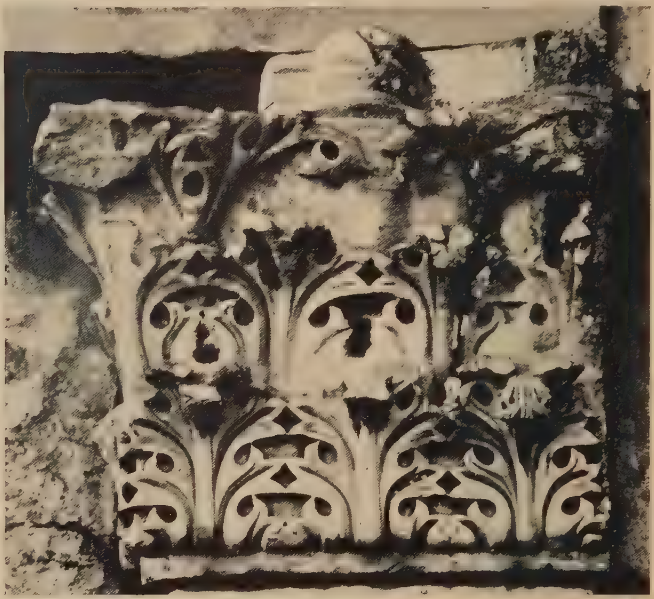
3. Capital from the Gethsemane Church, Jerusalem
By courtesy of the German Archaeological Institute, Berlin



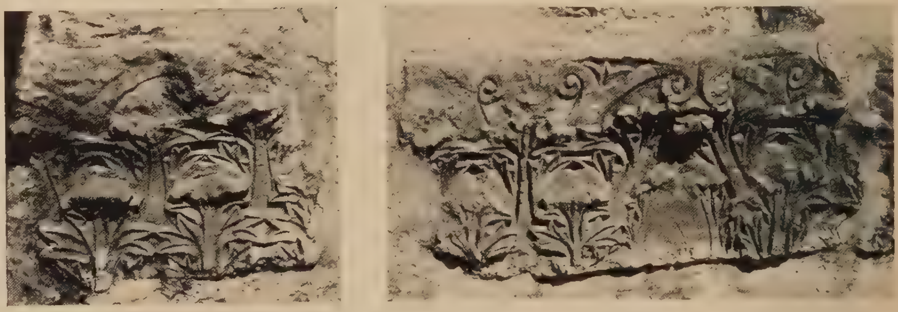
4. Capital from Ahnas. Egyptian Museum, Cairo, no. 7349



5. Detail of a niche from Ahnas
Egyptian Museum, Cairo, no. 7292*b*



6. Capital of the Golden Gate, Istanbul
By courtesy of the German Archaeological Institute, Berlin



7 and 8. Capitals from the Church of St. John Baptist, Jerusalem
By courtesy of the École biblique et archéologique française, Jerusalem

Published by the Society of Antiquaries of London, 1938

regularized pattern, the spreading-out of the tips, and the forming of conventional shadow ornaments between them. The first dates from *c.* A.D. 390,[1] the others probably from about 450–60.[2] The capitals of the Golden Gate in Constantinople, built *c.* 425–30,[3] are usually regarded as the earliest quite outspoken examples of the new style. Although a different type of acanthus is here used these capitals very well illustrate the general tendency towards an abstract and stylized leaf-pattern, and they also show us how the volutes disappear behind the leaves (see pl. LXVIII, 6).

It is therefore clear that it was between the late fourth and the middle of the fifth century that the character of the acanthus capital was so completely transformed. The Ahnas capital, however, is in all its details definitely allied to the fifth-century examples. Like the capitals from the Golden Gate it shows the volutes disappearing behind the sheath-leaves. It has the spiky acanthus of the capitals in St. John's in Jerusalem with their sharply cut outlines and deep shadows. There are only three tips to every lobe, and these are spread out like a fan. Although the capital from Ahnas is not comparable in *all* its details with any of the dated specimens on pl. LXVIII, its style cannot be explained without the general development which they illustrate, and which they prove to have taken place between the late fourth and the middle of the fifth century. Our capital, in other words, is not likely to be earlier than *c.* A.D. 450.

It may, however, be argued that the date of our capital cannot be determined by assigning to it a definite place in the general evolution of the Corinthian capital because it belongs to a local school, and has a structure which does not correspond exactly to that of the international late antique type. Its main peculiarity, which it shares, incidentally, with a great many other capitals made in the local schools of Egypt, consists in the fact that in the upper row the acanthus leaves are set very wide apart, so that the cauliculi and sheath-leaves which grow out of them are completely uncovered. The joints between cauliculi and sheath-leaves are emphasized by enormous knobs. During the first and second centuries it had been normal to show the cauliculi, but afterwards the general development tends towards setting the acanthus leaves more and more closely together, so that they cover the cauliculi completely, and very often even part of the sheath-leaves.[1] The cauliculi never reappear in the normal acanthus capital, and they are still absent in our fourth- and fifth-century examples from Jerusalem and Constantinople.

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[1] It comes from the Gethsemane Church built between 380 and 390. Cf. L. H. Vincent and F. M. Abel, *Jerusalem*, ii, 306 ff., 328 ff., 1007 ff., and pls. 88 and 89, 7; Kautzsch, *loc. cit.*, p. 102, and fig. 295.

[2] They belong to the church of St. John the Baptist, cf. Vincent and Abel, *loc. cit.*, ii, 642 ff., 663 ff. The date is a hypothetical one but supported by many good reasons. Moreover this capital belongs to a larger group for which several fixed dates are available, all between A D. 440 and 480. Cf. Kautzsch, *loc. cit.*, p. 111.

[3] Cf. Weigand, *Athenische Mitteilungen*, 1914, pp. 17 ff.; Kautzsch, *loc. cit.*, pp. 44 ff.

We shall see later on that this is not the only case where earlier forms have been perpetuated in a local Egyptian school.[2] But in any case the Ahnas capital does not belong to the general Early Byzantine type and therefore the chronology established for the latter does not necessarily apply to it. However, about ten years ago excavations at Oxyrhynchus brought to light a series of capitals which belong to our local type and have the acanthus leaves set wide apart and the cauliculi with their sheath-leaves, or, where these are missing, the volutes clearly visible between them.[3] In fact they correspond to the capital from Ahnas in their general structure. But here the acanthus leaves are still softly modelled, their lobes stand up steeply and are composed of four or even five tips each. In other words, in execution of details they still correspond to our late fourth-century example from the Gethsemane Church in Jerusalem, which has, in fact, very similar acanthus leaves (cf. pl. LXVIII, 1 and 3). We therefore conclude that the capitals from Oxyrhynchus represent in the development of our local 'capital with cauliculi' the same stage as the capital from the Gethsemane Church does in the history of the normal Corinthian capital. In other words they show that the Ahnas capital had a local tradition behind it, and that this tradition, although using its own somewhat provincial type-models, reflects the evolutionary changes which took place in the more official art of the Eastern Empire between 390 and 430. The capital from Ahnas stands at the end of this development and being a backwater product it is therefore probably not earlier than 440 or 450.

One more observation may serve to confirm this date. We find on the Ahnas capital a number of little knobs inserted into some of the deep incisions between the lobes of the acanthus leaves. This feature—otherwise very uncommon—also occurs on the capitals from St. John in Jerusalem (see pl. LXVIII, 4, 7, and 8).[4]

The period about A.D. 450 is for all these reasons the most likely date for the Ahnas capital.[5] And since we found acanthus of very similar character on the figure sculptures of the 'hard' group at Ahnas these may be dated accordingly.

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[1] Cf. E. Weigand, *Jahrbuch des Deutschen Archäologischen Instituts*, 1914, pp. 59 ff.

[2] The same phenomenon occurs on certain Syrian capitals. Cf. Th. Wiegand, *Palmyra*, 1932, Text, p. 96, fig. 114; see also p. 160.

[3] E. Breccia, *Le Musée Gréco-Romain d'Alexandrie*, 1931–2, figs. 111, 112; our pl. LXVIII, 1 and 2.

[4] Cf. also a capital in Ephesus. Kautzsch, *loc. cit.*, pl. 18, no. 267 c.

[5] Kautzsch's contention (*loc. cit.*, p. 234) that there is no capital of local Egyptian type and consequently no such thing as 'Coptic art' before A.D. 500 cannot be maintained. When he derived the Coptic capitals with cauliculi and knobs from Kalat Seman he cannot have been aware of the fact that they occur at Oxyrhynchus in an undoubtedly earlier style.

While the group of 'hard' sculptures at Ahnas may thus be assigned to the middle of the fifth century, some of those of softer style may go back to the early years of that century or even to the last decades of the fourth. But they cannot be spread over a much longer period because, considered stylistically, the 'soft' carvings are the direct antecedents of the 'hard' ones, and there are so many remains in a style transitional between the two groups that the development must have been a more or less continuous one. Moreover, we shall see later that fourth-century decorative sculpture in Egypt was on the whole of a style essentially more classical than is found anywhere in the Ahnas group.

We therefore conclude that the hard style which we observe in the later carvings from Ahnas was developed roughly between the years A.D. 400 and 450. It was at this period that the sharply cut forms, deeply incised shadows, and regularized ornaments were evolved which then remain typical of Coptic sculpture for many generations.

The other main examples of this style are the sculptures from the monasteries of Apa Apollo at Bawit[1] and of Apa Jeremiah at Saqqara.[2] The carvings from these two sites are similar to those from Ahnas in type and execution, but represent a later stage within the local development. Since, however, the tradition of Ahnas is so clearly maintained in them, and since it was our main object to fix a date only for the first appearance of that peculiar Coptic style, a general reference to their chronological position may suffice.

At Saqqara and Bawit the decoration consists of friezes, capitals, and niches. The same types and motives occur again as at Ahnas, but they are distinctly more developed. Take for instance the capitals. On both sites numerous acanthus capitals have been found which are of the same type as the specimen from Ahnas which we have just discussed,[3] but the foliage is even stiffer and more conventionalized than before, and in many instances it is so thin and wiry that the body of the capital is visible beneath it (cf. pl. LXIX, 1). The tips of the leaves are arranged artificially so as to form rigid patterns. There are now often not more than two tips to every lobe. In many cases the volutes have entirely disappeared or have been fused with the sheath-leaves and form with them a single semi-abstract design. These acanthus capitals must be considerably later than the Ahnas capital of 450. Then there are others in which the scheme of the Corinthian capital has been abandoned altogether: the so-called basket capitals.[1] It has often been observed that these are provincial derivatives from the capitals in Justinian's churches in Constantinople and Ravenna,[2] and they are therefore not earlier than *c.* 540–50.

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[1] E. Chassinat, *Fouilles à Bawit. Institut français d'archéologie orientale. Mémoires*, vol. 13, 1911.

[2] J. E. Quibell, *Excavations at Saqqara*, vol. iii, 1907–8 (publ. 1909); vol. iv, 1908–10 (publ. 1912).

[3] Cf., e.g., J. E. Quibell, *loc. cit.*, vol. iii, pls. 27, 4; 28, 1, 2, 3, 5; 30; 32, 1; 33, 1; vol. iv, pls. 33; 34, 3, 5; 36, 3. Also E. Chassinat, *loc. cit.*, pls. 17–19, 34, 45–54, 92–5, 104–9.

Now the question arises whether these two types of capitals represent two different building periods at each of the two monasteries, a first one during which the traditional types of the acanthus capitals were still used, and a second one in which the basket type was introduced from Byzantium; or whether the local and the imported types existed side by side. Unfortunately, the publications dealing with the two sites do not contain a single example of the two types of capitals clearly belonging to the same architectural contexts and therefore being incontestably of the same date. There are, however, in Cairo Museum, parts of an ornamental porch from Bawit,[3] consisting of engaged columns and an elaborately decorated archivolt; these columns are crowned by 'Corinthian' capitals of the most degenerate type (cf. pl. LXIX, 3 and 5), while the shafts are decorated with a frieze of vine leaves of exactly the same character as those with which most of the basket capitals are covered. In fact, this frieze must have been carved in a workshop where basket capitals were also made (cf. pl. LXIX, 2 and 4) and must be of very much the same date. This, however, means that late Corinthian capitals and basket capitals were made in Egypt during one period, and since the date of the latter is more or less determined by their immediate connexion with the work of Justinian's time the most degenerate type of acanthus capital must also belong to his reign.

Now by far the majority of the capitals at Bawit and Saqqara are either of the degenerate Corinthian type or of the basket type. This would seem to indicate that the sixth century is the main building period on these two sites, and that most of the stone carvings were produced during that period. Apart from capitals the most frequent stone carvings at the two monasteries are foliage friezes. We observe a greater variety of scroll types than we found at Ahnas, but the favourite Ahnas motifs occur here again, among them the scroll of interlaced acanthus leaves. But it is quite clear that most of the examples of this ornamental motif are later than those of Ahnas. In many cases the leaves have lost all their elegance, there is no vigour in the curving of the tendrils, they form a motionless, abstract pattern. In this form we find them, for instance, on the arcade from Bawit which we have just assigned to the sixth century on account

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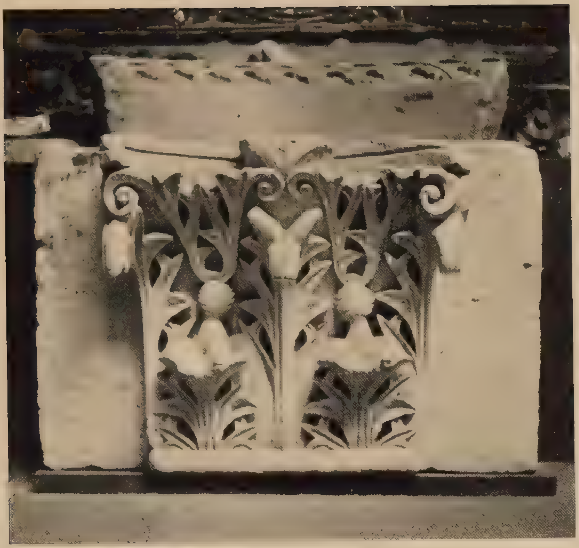
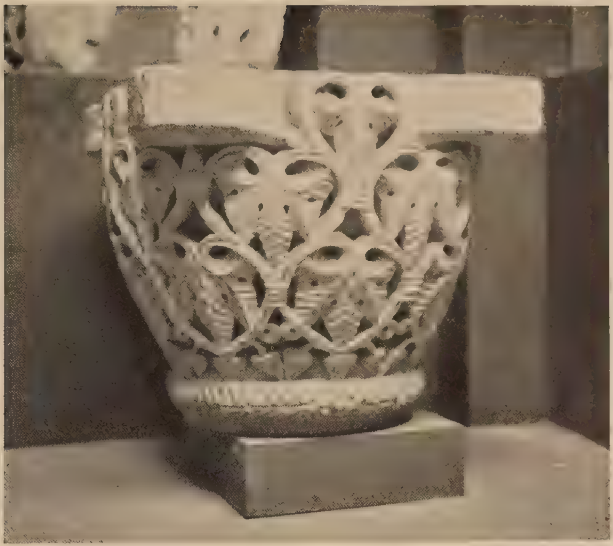
[1] Quibell, *loc. cit.*, vol. iii, pls. 16-21; 22, 1–3; 25; 29; vol. iv, pl. 32, 1–4. Also Chassinat, *loc. cit.*, pls. 98–103.

[2] Kautzsch, *loc. cit.*, p. 233.

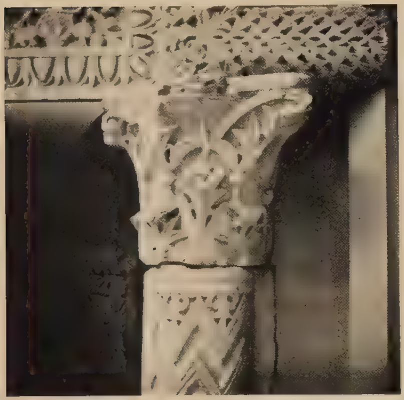
[3] Monneret de Villard, *loc. cit.*, figs. 79, 81. The fragments are here wrongly described as coming from Saqqara. Duthuit, *loc. cit.*, pl. 37 *a*, *c*; our pl. LXIX, 3–5.



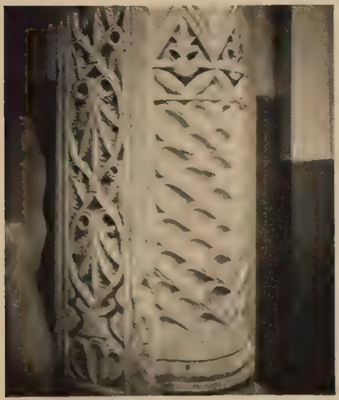
1. Capital from Saqqara. Egyptian Museum, Cairo, no. 10-16-20-3



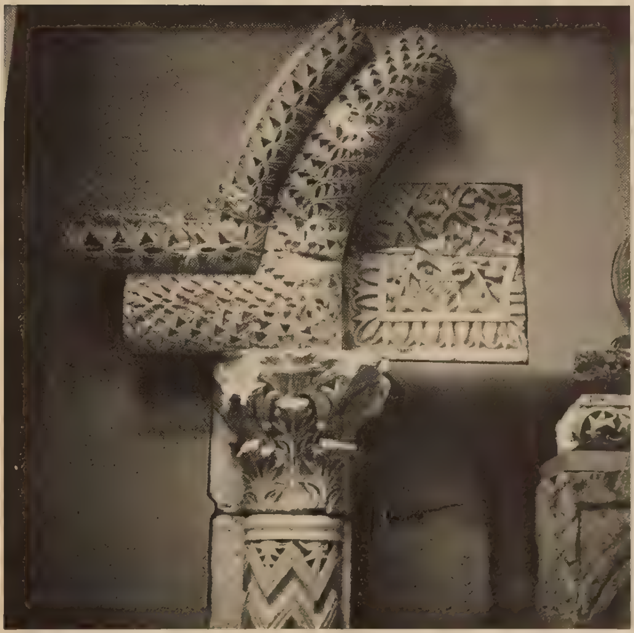
2. Capital from Ashmunein. Egyptian Museum, Cairo, no. 45394



3. Detail of a porch from Bawit. Egyptian Museum, Cairo, nos. 35821-3



4. Detail of a porch from Bawit. Egyptian Museum, Cairo, nos. 35821-3



5. Detail of a porch from Bawit. Egyptian Museum, Cairo, nos. 35821-3

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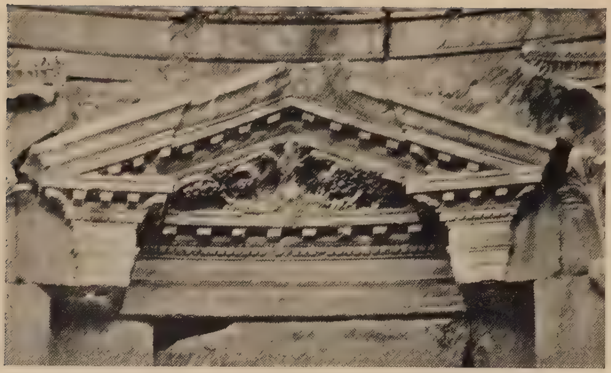
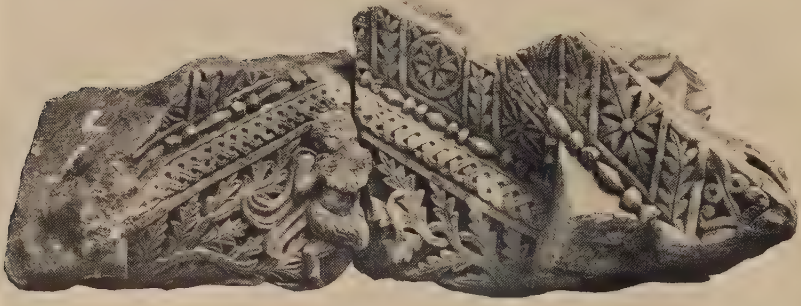
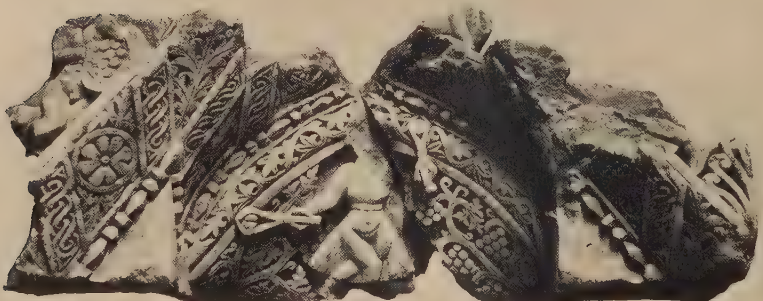


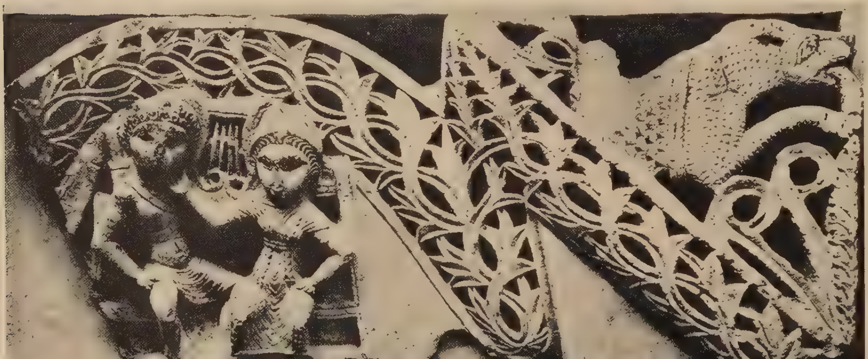
1. Niche, Baalbeck, Great Court



2. Niche from Oxyrhynchus. Musée Gréco-Romain, Alexandria
By courtesy of the Musée Gréco-Romain



3. Niche from Oxyrhynchus. Musée Gréco-Romain, Alexandria
By courtesy of the Musée Gréco-Romain



4. Niche: love scene. Egyptian Museum, Cairo, no. 7286

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of the vine leaf pattern on the door jambs (cf. pl. LXVIII, 5). And since many of the more important ornamental friezes at Bawit and Saqqara have interlaced acanthus borders of similarly rigid character we are justified in assuming that most of them are also of sixth-century date.[1]

There are very few pediments and niches at Bawit and Saqqara, and human figures are almost entirely lacking.[2] The hybrid forms of the gables from Ahnas occur sometimes,[3] but in an even more developed stage.

It is not intended to give here an exact chronology of the sculptures from Bawit and Saqqara. This is a somewhat thankless task since the excavators of the two sites have not succeeded in ascertaining the architectural history of the two monasteries and in relating the various fragments to individual building periods. But it is important to notice (*a*) that through deductions quite independent of those applied to the Ahnas sculptures we arrived at a sixth-century date for most of the fragments from Bawit and Saqqara; (*b*) that they are on the whole even more developed than the 'hard' sculptures at Ahnas, and thereby help to confirm the fifth-century date which we suggested for the latter; (*c*) that they show the whole development of Coptic sculpture to be one towards ever increasing abstraction and rigidity.

In fact, we can now trace a line of development from the 'soft' carvings at Ahnas late in the fourth century to the 'hard' group of about 450 and on to the highly abstract and conventionalized sixth-century work in Bawit and Saqqara. It is during the fifth century that the hard and sharp style first appears in Coptic art.[4]

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[1] Chassinat, *loc. cit.*, pls. 22 ff., 70.

[2] A number of reliefs showing a medallion flanked by flying angels have been found at Bawit (cf. Duthuit, *loc. cit.*, pls. XII *b*, XIII *a* and *c*). But the stylistic tradition of Ahnas is not perpetuated in them. They are more closely connected with a group of works which will be discussed in our last section (see p. 213, n. 2).

[3] Quibell, *loc. cit.*, vol. iii, pl. 37, 2.

[4] One would imagine that a fixed date for the chronology of Coptic decorative sculpture could be derived from the capitals and friezes of the White Monastery near Sohag, which is known to have been founded about the year A.D 440 (cf. Monneret de Villard, *Les Couvents près de Sohag*, vol. i, 1925, pp. 18 ff.). The scroll work on the sculptured architraves in the apse is not of exactly the same type as that in Ahnas, Bawit, and Saqqara, but it is strongly conventionalized and shows naturalistic design replaced by an abstract and closely knit pattern of lights and shadows. It therefore seems to be of a date at least as late as the most advanced sculptures at Ahnas (see also below, p. 200, note 4), and the date known for the building would seem to afford the best corroboration of our chronology. Unfortunately, however, these friezes appear not to have been originally carved for the monastery. They are made up from pieces of different design and the pattern changes abruptly at many points where two stones are joined together. Moreover, the majority of the pieces are not curved as their present position in the apse of the building would require. These friezes had, therefore, been previously used in some other building (as Monneret de Villard, *loc. cit.*, vol. ii, 1926, p. 126, had suggested), and we are faced with the dilemma either of having to admit that ornament so degenerate in style was possible at a period considerably earlier than A.D. 440, or else that part at least of the present building dates from a later reconstruction. My wish here is merely to state a problem which

In concluding these remarks on the chronology of early Coptic sculpture brief reference must be made to the problem of the survival of paganism to which some of them so obviously bear witness. The majority of the figure sculptures from Ahnas, both the 'soft' and the 'hard' ones, are in fact pagan in subject-matter; they make it necessary for us to assume that pagan mythology was still alive in the middle of the fifth century. At Bawit and Saqqara, on the other hand, where there is very little figure sculpture, no evidence of paganism has been found.

Many students believe that the pagan no less than the Christian scenes in the Ahnas group formed part of the decoration of Christian buildings. This assumption is based on two arguments. The first one is the incontestable unity of type and style between the carvings of both kinds of subject (cf. pl. LXVII, 1, and pl. LXX, 4). But a similar relationship exists between wall decorations of pagan houses and Christian catacombs in Rome, simply because the craftsmen were the same in both cases. The second argument seems more serious: In Naville's excavation report from Ahnas we read that he found in the ruin of one building capitals with crosses; this he consequently took to be a church, a view which receives support from the fact that the fabric, although destroyed beyond reconstruction, certainly included an apse.[1] Now the other carvings he found also came from this site, and they included 'friezes with flowers, arabesques, and animals, and even mythological subjects'.[2] But a glance at the plates in Naville's book shows that the capital which contains a cross (pl. 17) is of a type and style quite inconsistent with the other carvings (pls. 14–16) and cannot possibly have been made for the same building. It is therefore more likely that some or all of these fragments were simply used as building material in a structure of later date.

In other words: There is no cogent reason to assume that the pagan scenes were ever carved to adorn the same buildings as the Christian sculptures. Both Strzygowski's theory, which ascribes to Egyptian Christianity a particularly sensual character,[3] and the attempts of others to give the pagan

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cannot be solved without a renewed and thorough study of the building and an adequate photographic record of the decorative friezes and of the capitals (most of which are also re-used).

Apart from the White Monastery there are two other sites on which larger quantities of architectural sculpture of a distinctly local style have so far been found. These are the Red Monastery and the church of Denderah. Both these buildings have a decoration homogeneous in style and apparently carved especially for them. But unfortunately no date is available for either of the two structures, and since neither is adequately published they cannot at present be taken into account.

[1] *Loc. cit.*, p. 32 (see p. 183, note 1).

[2] *The Season's Work at Ahnas and Beni Hasan*, 1891, p. 8 (Egypt Exploration Fund, Special Extra Report, 1890–1).

[3] Cf. for this point J. Maspero's remarks in *Recueil de travaux relatifs à la philologie et à l'archéologie égyptiennes et assyriennes*, N.S., vol. v, 1915, pp. 97 ff.

mythological subjects a Christian interpretation[1] are, to say the least, superfluous.

The presence of these scenes in fifth-century sculpture finds a much more natural explanation when the overlapping of a pagan Greek population into Christian times is taken into account. There are numerous records to testify to a survival of paganism in the East Roman provinces, and especially in Egypt, throughout the fourth and fifth centuries.[2] For our purpose it may be enough to mention Apa Shenoute's invectives against his pagan contemporaries and their religion.[3] Shenoute lived in the first half of the fifth century, that is to say precisely at the period to which we assigned most of the Ahnas carvings. With particular reference to the representations of Leda and the Swan it should be remembered that Procopius describes a very similar scene as having been performed on the stage by the Empress Theodora in the humble days of her youth, that is to say early in the sixth century.[4]

We must get used to the fact that most of the carvings from Ahnas are not Coptic in the true sense of the word, but represent the last stage of Greek art in Egypt. They have been called Coptic simply because the same style and type of sculpture were used by the Christians when they in their turn began to give their churches and monasteries an ornamental decoration. The pediments and the capitals, the friezes and the foliage motifs survived in Christian art. But only in their early buildings do the Christians appear to have followed the pagan practice of inserting large size figures into the architectural setting. We find a few specimens of Christian figure sculpture at Ahnas; at Bawit and Saqqara they have already disappeared.

II. *The Sources of Coptic Sculpture*

Having thus found the fifth and sixth centuries to be the decisive period for the evolution of the peculiar style of Coptic stone sculpture, we come next to the crucial question of the manner in which this development originally started. Can it be explained through the ordinary course of development in late antique sculpture, or is it due to some special historical situation? It is on this point more than on any other that the opinions of students of Coptic art diverge. The fact that even the earliest and most 'classical' of the Ahnas sculptures are already of a very distinctive character, and that so far no traces have been found in Egypt of a gradual development leading up to them, make it understandable that so many attempts should have been made to explain this style by a sudden break with the Hellenistic tradition, and to see in it either a return to the tradition of Pharaonic art or an influence from Asiatic countries. Such theories, however, were apt to become fantastic, and in reaction to them other students have tried to show that Coptic art does not really contain anything outside the tradition of late antique art. A number of discoveries made during the last few years throws new light on this problem, and we shall find that a standpoint half-way between the two theories probably comes nearest to the truth.

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[1] Cf. J. Lauzière in *Bulletin de l'Association des Amis de l'Art copte*, ii, 1936, p. 38, where the scene of Leda and the Swan is interpreted as St. Anna's immaculate conception of Mary. The writer admits, however, that the carvings concerned may not originally have been made for churches. But he thinks that they were re-used there (p. 41). In this case we should still have to assume that pagan reliefs were made at a comparatively late date. Unfortunately the problem of date is not discussed in M. Lauzière's paper.

[2] Cf. *Cambridge Medieval History*, vol. i, 1911, pp. 112 ff.; Monneret de Villard, *La Scultura ad Ahnas*, p. 52, note.

[3] Cf., e.g., *Œuvres*, ed. Amélineau, vol. i, 1907, pp. 382 ff.

[4] Procopius, *Anekdota*, 9, 20–22, Opera, ed. Teubner, vol. iii, 1, 1906, pp. 59 f.

In discussing the sources of Coptic sculpture it will be advisable to deal with ornament and figure work separately. An attempt will first be made to trace the history of some of the principal ornamental motifs occurring on the early Coptic sculptures, and especially in the Ahnas group. This will clear the way for an inquiry into the origin of the figure scenes and their strange character.

It has been mentioned before that two kinds of decorative *niches* occur among these carvings. One is a simple conch (with or without a shell inside). This is a motif so common in classical architecture all over the Mediterranean that no conclusion can be drawn from its presence at Ahnas. Whenever there is a shell inside the niche it has the hinge at the bottom, which is the normal form in the eastern provinces of the Roman Empire.[1] The other and more complicated form has a broken outline, as shown for instance on pl. LXX, 4. Strzygowski has pointed out that this is derived from a type of pediment of which there are many examples at Baalbeck (cf. pl. LXX, 1). But to take this as a proof of Syrian, meaning oriental, influence in Coptic art, would be misleading. We find the same form in other parts of the Roman world, for instance in the Roman theatre at Aspendos in Asia Minor, a building which is probably earlier than the niches at Baalbeck.[2] Wherever it was first invented, the feature belongs not to Syrian architecture in particular, but to late antique architecture in general, and is one of its typically baroque inventions.

But it may be argued that the Ahnas gable as compared with Roman examples, shows a very late and degenerate form. The main difference is that at Baalbeck and Aspendos the form of a classical triangular pediment is still preserved, whereas at Ahnas the lower cornice is always omitted, and the central part of the upper moulding is no longer triangular, but usually adopts the

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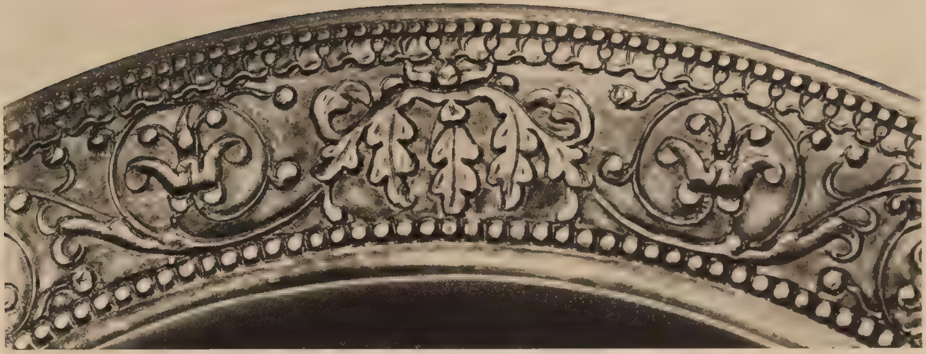
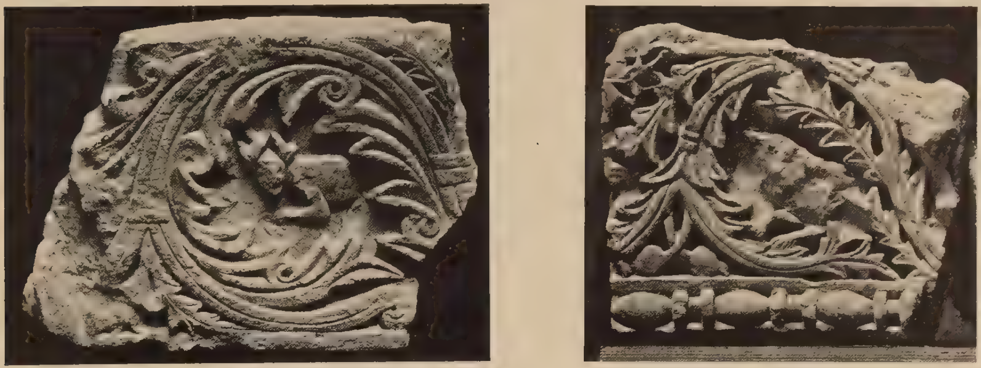
[1] Cf. E. Weigand, *Jahrbuch des Deutschen Archäologischen Instituts*, 1914, p. 64.

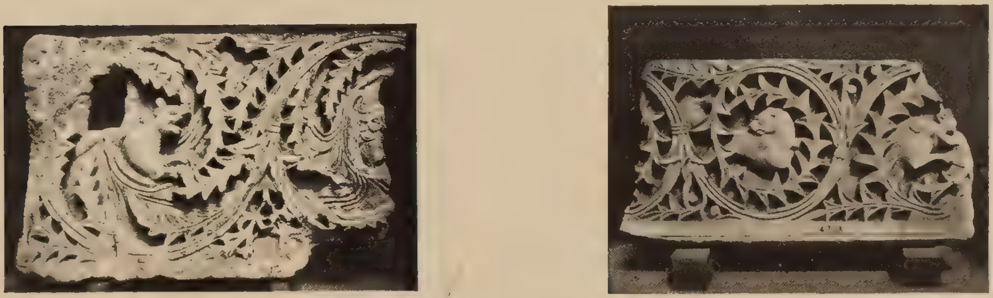
[2] Count C. Lanckoronsky, *Les Villes de la Pamphylie et de la Pisidie*, 1890, vol. i, pls. XXIV ff.



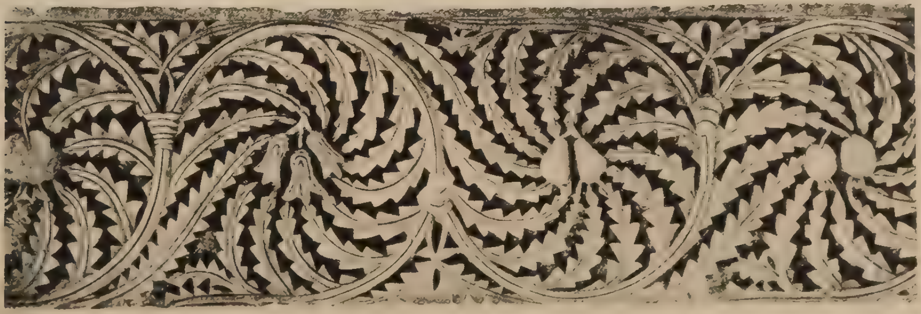
1. Detail of silver bowl from Chaource
By courtesy of the Trustees of the British Museum



2, 3. Fragments of a frieze from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



4, 5. Fragments of friezes from Ahnas. Egyptian Museum, Cairo, nos. 20-1-34-3, and 47113



6. Fragment of a frieze from Bawit

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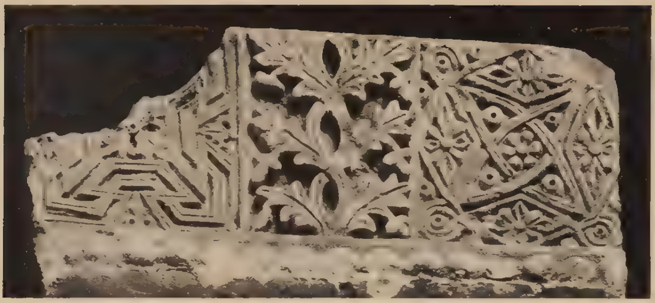
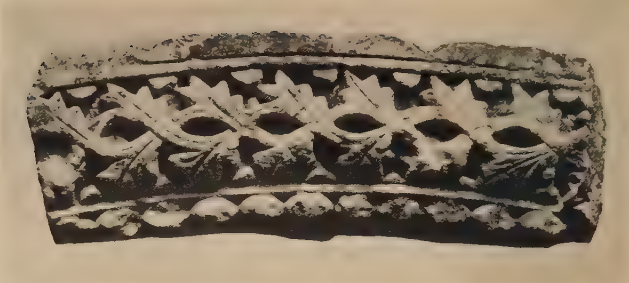
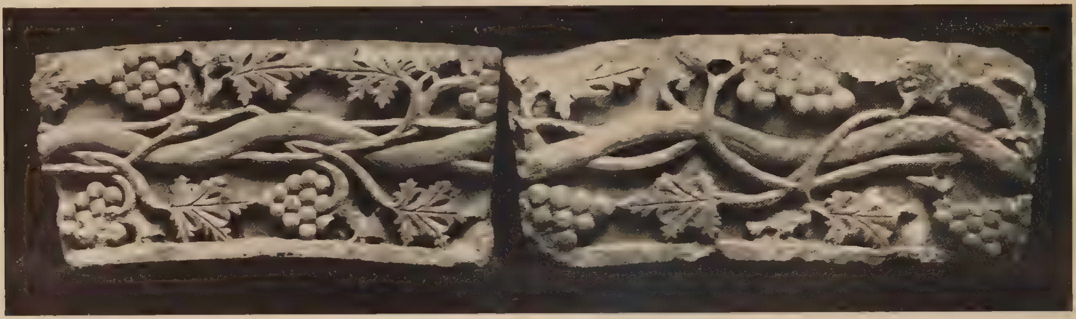


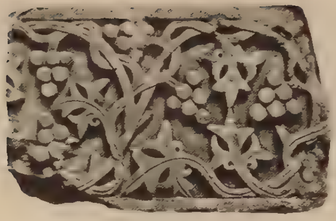
1. Fragment of a cornice from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



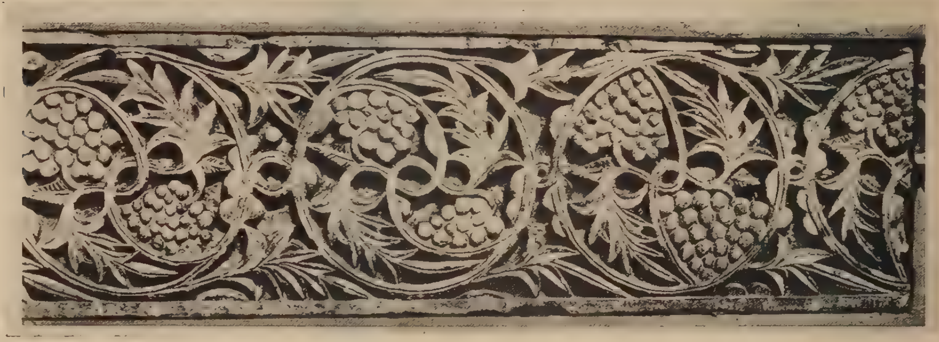
2. Fragment of a frieze from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



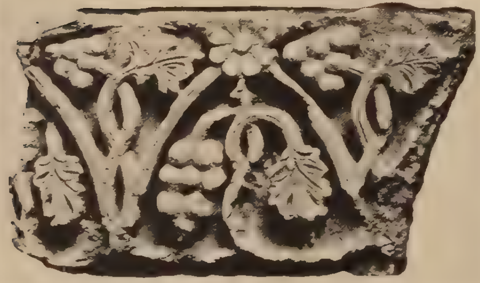
3. Fragments of friezes from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



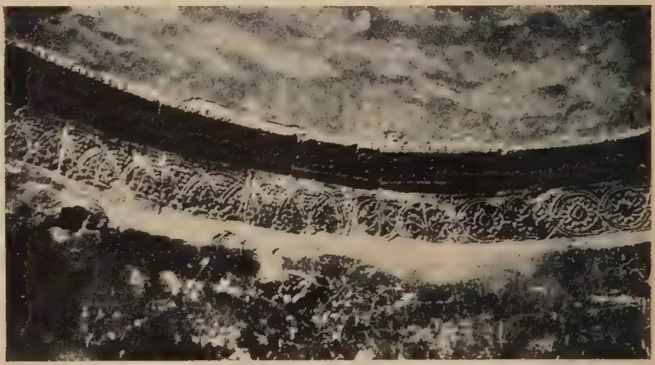
4. Fragment of a frieze from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



5. Fragment of a frieze from Bawit. Egyptian Museum, Cairo, no. 35837 *d*



6. Fragment of a frieze from Oxyrhynchus
By courtesy of the Musée Gréco-Romain, Alexandria



7. Detail of the eastern apse of the White Monastery near Sohag

Published by the Society of Antiquaries of London, 1938

circular outline of a conch. It is really a hybrid mixture between the triangular broken edicula of Baalbeck and the conch. Moreover, in Baalbeck the break in the outline is still comparatively slight, the cornice is supported by consoles in accordance with the classical rule, and there is only one small merely decorative figure, surrounded by foliage and modestly kept in the background of the tympanum, whereas in Ahnas the figures have become the dominating feature and the gable itself is degraded to a mere frame. Obviously the Baalbeck gable is the prototype, and the Coptic one a much altered derivative. If no model approaching the Baalbeck type can be found in Egypt, we must continue to derive the Ahnas gable form from one of the other provinces of the Roman Empire of which Syria is the nearest and the obvious one to draw into the discussion.

Egypt, however, can offer a somewhat closer comparison to Baalbeck than the Ahnas gable would suggest. As in the case of the Ahnas capital, the excavation of Oxyrhynchus has again provided specimens of a type not yet quite so developed as in Ahnas, with a triangular outline still clearly preserved, with the consoles still in position, and the figure work still confined to the small merely decorative shape of a Faun or a Bacchante. There is a whole series of such gables at Oxyrhynchus which allow us to follow the earlier stages of the development that led to the hybrid forms of the Ahnas gable, and especially the gradual adaptation of the central part of the pediment to the form of a conch (cf. pl. LXX, 2 and 3). Here again, as in the case of the capital, the sculptures from Oxyrhynchus enable us to rescue the Ahnas group from its isolation, and to show that there were prototypes for it within the boundaries of Egypt and even very near at hand. Moreover, in this case the Oxyrhynchus finds, although they are obviously decadent as compared with Baalbeck, bring us at least into the neighbourhood of international Roman standards and thus provide a link between the official art of the Empire and the Coptic style of Ahnas.[1]

A similar link is provided by the finds from Oxyrhynchus for the history of the Coptic *acanthus ornament*. The acanthus foliage on the friezes from Ahnas, and certainly that at Saqqara and Bawit, is of a highly stylized type: a rigid monotonous pattern of flexible branches symmetrically set with little triangular leaves (Strzygowski's *Wedelranken*, see pl. LXXI, 5 and 6). It is true that among the friezes from Ahnas there are a few specimens of such foliage scrolls not quite so conventionalized as at Bawit and Saqqara (cf. pl. LXXI, 4).

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[1] Monneret de Villard (*loc. cit.*, p. 66) tries to arrange the gable types at Ahnas in an evolutionary series starting with the classical conch and ending with the broken gables. But the examples from Oxyrhynchus show that the broken gable also occurs in Egypt in its classical shape and is therefore not necessarily of a later date than the niches of conch type. What is late is not the broken gable itself, but the hybrid mixture of triangular gable and semicircular conch such as we find in many Ahnas examples, and most outspokenly in the gables of the 'hard' group.

This fact again helps to confirm the thesis that the finds from Ahnas are on the whole a little earlier than those from the two monastic sites. But the type of acanthus even here differs strongly from the classical one. It has never had its genealogy traced within Egypt, and has therefore often been called an import from Syria.[1]

At Oxyrhynchus, however, we see these *Wedel* gradually appear. There are fragments of acanthus scrolls which show the branches still, as it were, in profile with leaves only on one side of the stem. This is the rule in classical acanthus ornament, and a fragment like that on pl. LXXI, 2, although much inferior in execution, is not essentially different in type from Late Roman friezes like those at Leptis Magna[2] and Spalato.[3] Then there are others with part of the volute still set with leaves in profile, while another part is filled with a branch of the *Wedel* type, that is to say, symmetrically set with two rows of triangular leaves (cf. pl. LXXI, 3). One step farther and the stage of the Ahnas scroll is reached.

Since we can see a gradual development of this ornament on Egyptian soil we need no longer regard it as imported from Syria. It is true that we can trace its early history on Syrian monuments too. Acanthus branches with symmetrical rows of leaves, although of rather different shape, are found on Jewish ossuaries and in decorations of Jewish tombs in the neighbourhood of Jerusalem.[4] But these belong to a larger group of rather wide distribution, and it has been repeatedly suggested that the original source of the decoration of this group was Alexandria and not Palestine.[5] The earliest extant examples of an acanthus ornament with symmetric pairs of leaves of the same triangular shape as we find in Coptic sculpture seem to be the friezes of the Roman Gate in Si, provided that Butler's drawing[6] is trustworthy and the second-century date correct. An early example in Syria of such a *Wedel* finding a place in the classical acanthus scroll is the frieze of the south gate of the temple wall at Damascus,[7] while at the synagogue of Tell Hum we find this kind of foliage consistently employed much in the same way as on the Coptic carvings.[1] But the motif also occurs at an early date in a work which is certainly not of Syrian origin, namely in the ornamental frieze of the silver bowl from Chaource in the British Museum, which dates from the first half of the third century (pl. LXXI, 1).[2] To judge by its shape this bowl comes from a Gaulish workshop, which was, however, probably in close touch with Alexandria.[3]

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[1] Strzygowski, *loc. cit.*, p. 45; O. Wulff, *Beschreibung der Bildwerke der christlichen Epochen*, vol. iii, pt. 1; *Altchristliche Bildwerke*, 1909, p. 65.

[2] *Africa Italiana*, vol. iv, 1931, p. 70, fig. 41.

[3] E. Hebrard and J. Zeiller, *Spalato. Le Palais de Dioclétien*, 1912, p. 81.

[4] Cf. Tomb of the Judges (C. Watzinger, *Denkmäler Palästinas,* ii, 1935, pp. 59 ff., fig. 63); Tomb in the Hinnom Valley (*Gazette Archéologique*, 1880, pl. 31).

[5] Cf. R. Zahn, in W. Schulz and R. Zahn, *Das Fürstengrab von Hassleben, Römisch-Germanische Forschungen*, vol. vii, 1933, pp. 71 f.; C. Watzinger, *loc. cit.*, p. 70.

[6] H. C. Butler, *Princeton University Archaeological Expeditions to Syria in 1904-5 and 1909*, Division II, Architecture; Section A, Southern Syria, 1919, p. 396, fig. 342.

[7] C. Watzinger and C. Wultzinger, *Damaskus. Die antike Stadt. Wissenschaftliche Veröffentlichungen des Deutsch-Türkischen Denkmalschutzkommandos*, vol. iv, 1921, p. 8, fig. 9; cf. especially the first volute on the left.

There is then ample justification for rejecting a Syrian derivation for the Coptic type of acanthus foliage. Its origin may be connected with Alexandria at least as definitely as with Syria. By the third century at latest it had become known in other parts of the Roman Empire. And the process by which it gradually replaced the traditional acanthus foliage is traceable not only in Damascus and Tell Hum, but, thanks to Oxyrhynchus, also in Egypt. The contact between the two countries was probably very close, and the development may have been a more or less parallel one throughout the Roman period. In Christian times, however, this particular type of acanthus was to enjoy much greater popularity in Egypt than in Syria.

The Oxyrhynchus friezes show us how, from a type of acanthus more generally known in third-century art, a particular Coptic type was developed. We saw that the same position was occupied by the pediments from Oxyrhynchus in the history of the Coptic niche.

The various motives which occur in Egypt in connexion with the acanthus foliage hardly call for comment. Since the second century A.D., both in the East and in the West, the practice of filling the centre of acanthus volutes with half-length figures of animals had been so common that this feature must also be described as an international one and cannot be used as an argument in favour of any particular foreign influence on Coptic decorative art.[4] Apart from the animals we often find little offshoots with buds and fruits projecting from the acanthus stem. These have been fully discussed by Zahn, who suggests an Alexandrian origin for them and shows how wide a distribution they had throughout the Roman Empire.[5]

Two other types of ornament must be briefly mentioned as particularly characteristic of Coptic sculptures.

One is the *interlaced foliage frieze* which we found to be one of the stock patterns at Ahnas, Bawit, and Saqqara. This conventionalized ornament does not seem to occur outside Egypt, and again it is the group from Oxyrhynchus which shows us how it was gradually developed on Egyptian soil out of fairly naturalistic acanthus branches (cf. pl. LXX, 2; pl. LXXII, 1 and 2).

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[1] H. Kohl and C. Watzinger, *Antike Synagogen in Galiläa*, 1916, pp. 29 ff., figs. 54 ff.

[2] Cf. Zahn, *loc. cit.*, pp. 67 ff.

[3] Cf. Zahn, *loc. cit.*, p. 76.

[4] Cf. H. Kohl and C. Watzinger, *loc. cit.*, pp. 153 f.

[5] Cf. R. Zahn, *loc. cit.*, pp. 70 ff.

The other motif is the *vine scroll* which, although not found at Ahnas, is frequent at Bawit and Saqqara.[1] Here again the finds from Oxyrhynchus reveal the earlier stages of a development of which only the last and most sophisticated results are found in the Coptic monasteries. We see how naturally growing tendrils with real vine leaves and bunches of grapes were gradually transformed into an abstract ornament (pl. LXXII, 3–5). A number of the most naturalistic vine patterns from Oxyrhynchus are closely related to certain Syrian friezes, although certainly not as carefully carved or as early in date.[2] It is difficult to decide whether this ornament is ultimately of Syrian or of Alexandrian origin, but, whatever its source, it enjoyed great popularity in both countries (as well as in the West) throughout the Roman period, and it was from classical models in Egypt that the Coptic vine pattern was eventually derived.

Therein lies the great importance of the Oxyrhynchus finds. Although mainly of inferior quality they show us all the important Coptic ornamental motifs in the making, they prove that these motifs were developed in the country and not imported from abroad, and allow us to trace their history on Egyptian soil back to a stage where they can be compared with classical ornament in many other parts of the Mediterranean. It is true that, measured by classical standards, they are rather crude and therefore comparatively late. But they show us that there was in Egypt a decorative art as rich and varied in its motifs and as lively and naturalistic in style as in any other East Roman province. This is after all only what might be expected, but since no remains of such an art had so far been known, Coptic sculptural ornaments always seemed to be without ancestry in Egypt, and this is why they were so frequently considered to have been imported wholesale from the neighbouring countries of Asia.

The sculptures from Oxyrhynchus, although generally speaking of an international late antique type, are of course particularly closely related to those of Syria and Palestine. Architectural ornament, especially during the later centuries of Roman rule, is not entirely of one type and style in all parts of the Empire. There are regional differences and it is natural that neighbouring provinces should be linked by particularly close affinities. The 'capitals with cauliculi' for instance are due to a purely local survival of earlier classical forms into Late Roman times, a survival which is rarely found in the East Mediterranean countries outside Egypt and Syria.[3] But this may be a tradition

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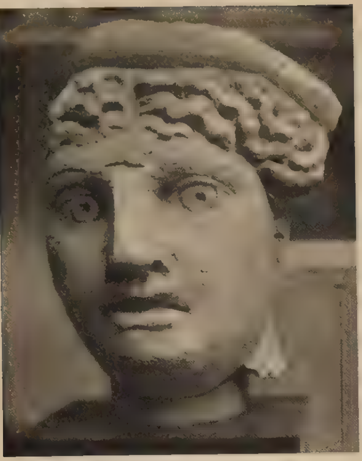
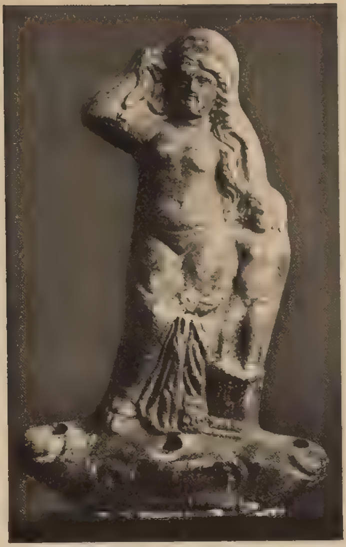
[1] Chassinat, *loc. cit.*, pl. 85; Quibell, *loc. cit.*, vol. iii, p. 34; vol. iv, pl. 40.

[2] Breccia, *Le Musée Gréco-Romain d'Alexandrie*, 1931–2, fig. 94, should be compared with H. C. Butler, *loc. cit.*, p 377.

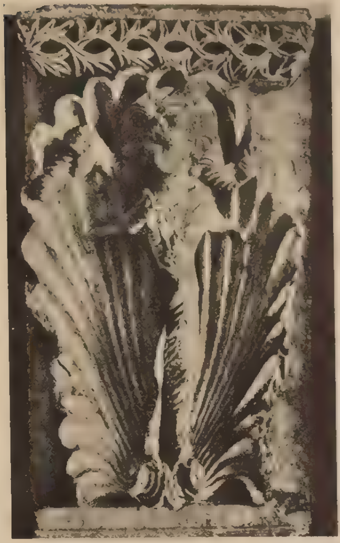
[3] See above, pp. 187 f.



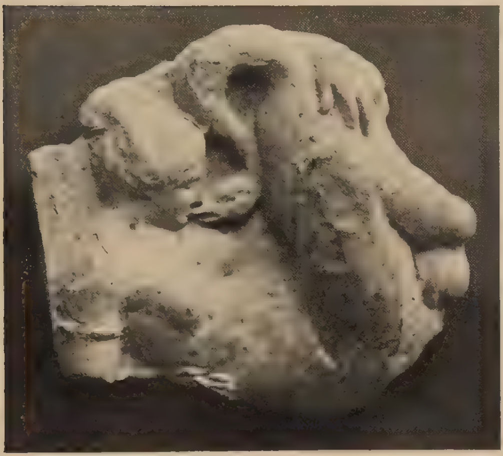
1. Stucco head from Memphis, British Museum



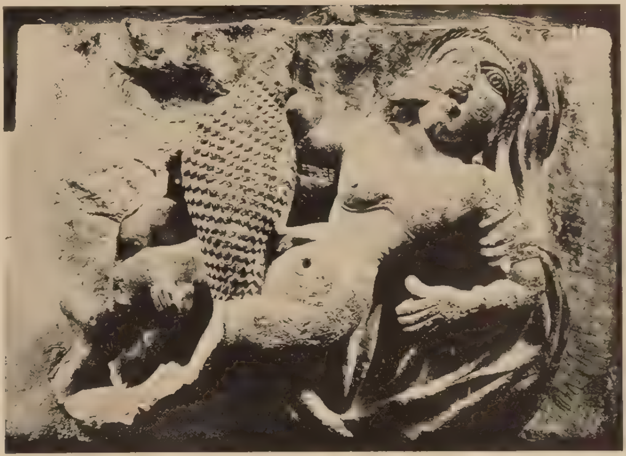
2. Venus Anadyomene; terracotta
By courtesy of the Musée Gréco-Romain, Alexandria



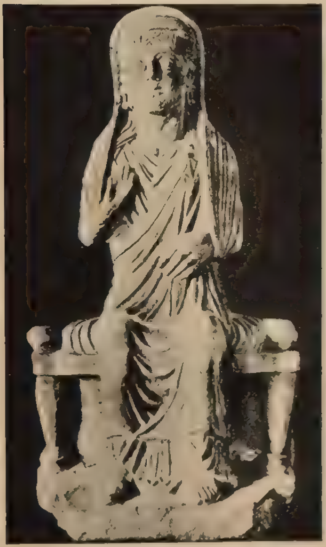
3. Venus Anadyomene. Egyptian Museum, Cairo, no. 44072



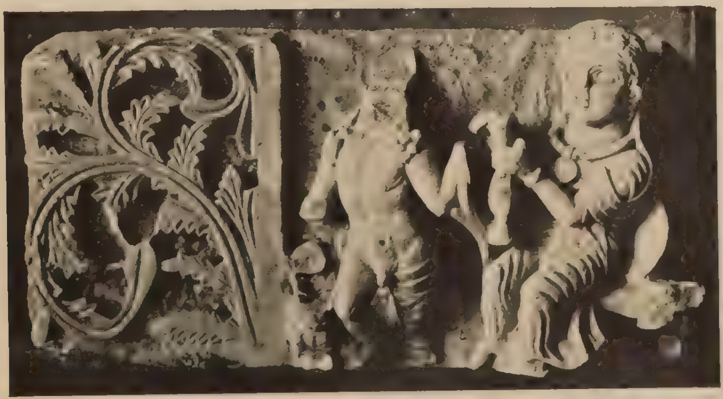
4. Leda and the Swan: terracotta
By courtesy of the Musée Gréco-Romain, Alexandria



5. Leda and the Swan, from Ahnas. Musée Gréco-Romain, Alexandria

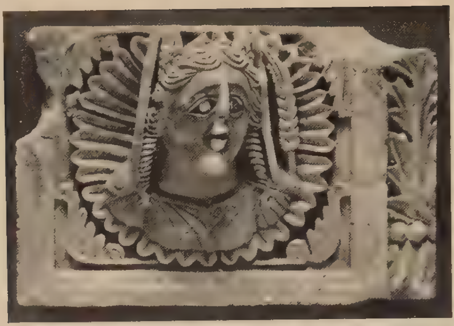


6. Statuette from Palmyra (see *Syria*, 1936, pl. 49)

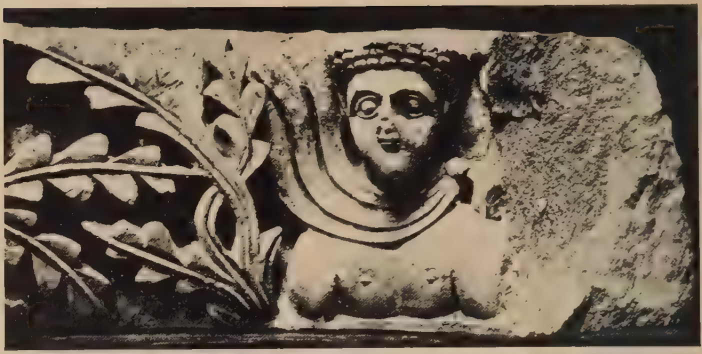


7. Figure relief from Ahnas. Coptic Museum, Old Cairo, no. 3558
By courtesy of the Coptic Museum

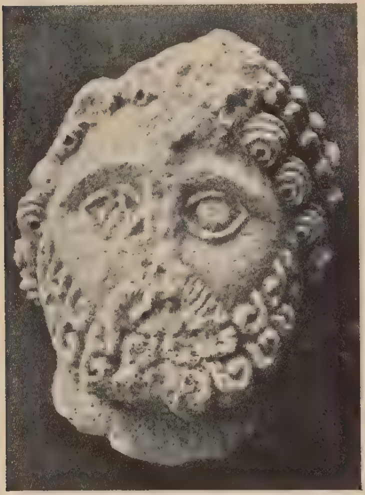
Published by the Society of Antiquaries of London, 1938



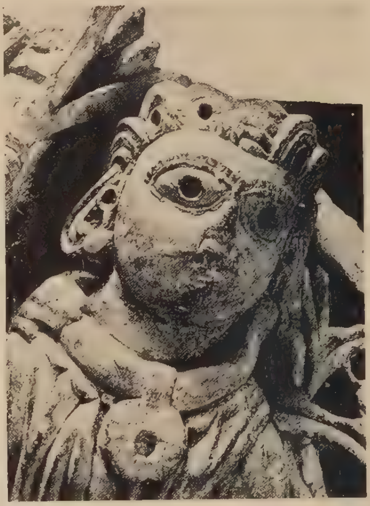
1. Atargatis as Grain Goddess, from Khirbet-et-Tannur, Transjordania
By courtesy of the American School of Oriental Research, Jerusalem



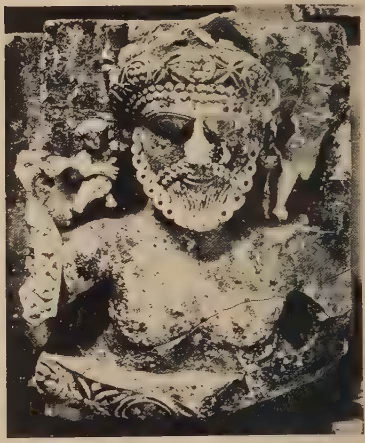
2. Bust in foliage. Egyptian Museum, Cairo, no. 45943



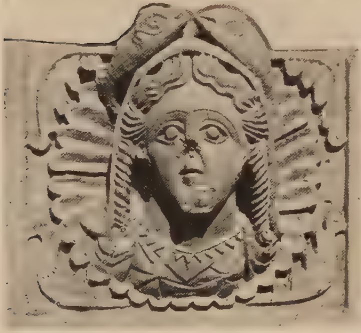
3. Zeus-Hadad, from Khirbet-et-Tannur
By courtesy of the American School of Oriental Research, Jerusalem



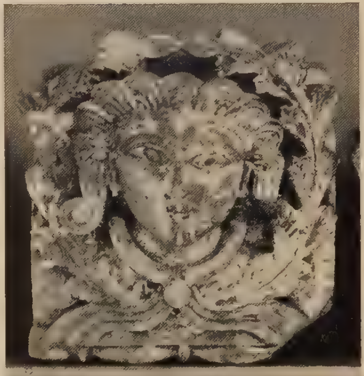
4. Detail of a figure-scene. Egyptian Museum, Cairo, no. 7292 *b*



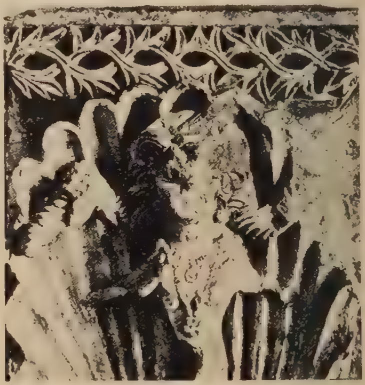
5. Bust from Ahnas. Egyptian Museum, Cairo, no. 46726



6. Atargatis as Fish Goddess, from Khirbet-et-Tannur
By courtesy of the American School of Oriental Research, Jerusalem



7. Female head from Ahnas. Egyptian Museum, Cairo, no. 49660.



8. Venus Anadyomene. Detail of pl. LXXIII, 3

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common to both countries and does not necessarily indicate an influence going from Syria to Egypt. The Corinthian capital is known to have developed on parallel lines in both countries even in Hellenistic times.[1] The contact between the two countries was very close and questions of priority are not easily decided. Undoubtedly Egypt has given at least as much as it has taken. It is enough to remember the numerous Nilotic scenes which found their way into the decorative designs of mosaic pavements all over the Roman world and particularly in Palestine.

One particular feature of the capitals from Oxyrhynchus, namely a little leaf inserted into the space between the volutes, has always been regarded as a typically Palestinian feature,[2] and is here found for the first time on Egyptian capitals (see pl. LXVIII, 1). But this detail may also have been common to both countries during a long period and is not necessarily a sign of Palestinian influence in Egypt. A similar element, which is certainly due to a local survival of pre-Roman Hellenism unimpaired by the standardizing influence of imperial art, is the rosette found on some of the capitals from Oxyrhynchus instead of the little pointed leaf (cf. e.g. pl. LXVIII, 2).[3] Apart from these details indicating a close parallelism between the decorative styles of Egypt and Syria, there are, however, a few motifs which must have reached Egypt from Syria and perhaps via Syria from more distant parts of Asia.[4] But these are isolated cases, and in view of the fact that all the principal ornaments have been shown to be rooted in Egypt's classical tradition they may be regarded as being of secondary importance.[5] Moreover, we do not know how many of them had already crossed the frontier from Syria in Hellenistic and Roman times, and in cases where this may have happened the occurrence of such motifs in Coptic Egypt cannot be regarded as evidence of direct influence of Syrian art on Coptic art.

In any case our knowledge of architectural ornament in Egypt is no longer confined to those few motifs which survived in a markedly reduced form, in Ahnas, Bawit, and Saqqara. We now possess a rich programme of decorative designs, which puts Egypt on an equal footing with Syria, and of which Coptic sculpture represents a late and simplified derivative.

We conclude that Coptic sculpture, as far as its decorative setting is concerned, was chiefly developed from the Hellenistic tradition of Egypt itself. The history of decorative stone carving in Egypt no longer starts with Ahnas. It starts on a far more classical level with the sculptures from Oxyrhynchus.[1]

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[1] Cf. E. Weigand, *Jahrbuch des Deutschen Archäologischen Instituts*, 1914, p. 4, and *Jahrbuch für Kunstwissenschaft*, 1924, pp. 80 f.

[2] Cf. E. Weigand in *Byzantinische Zeitschrift*, vol. 23, 1914–19, pp. 192 ff.; Kautzsch, *loc. cit.*, p. 33. There are also a few examples of this motif in Asia Minor, cf. Kautzsch, *loc. cit.*, pp. 86, 101.

[3] Cf. E. Weigand, *Jahrbuch für Kunstwissenschaft*, 1924, pp. 89 f.

[4] Cf. E. Drioton, *loc. cit.* (see p. 181, note 4).

[5] Drioton, although he does not use the Oxyrhynchus sculptures as evidence, also admits that the primary source of Coptic decoration was the Hellenistic tradition of Egypt itself.

But how far back into classical times do these sculptures lead us? Breccia in his brief and summary excavation report suggests that the Oxyrhynchus fragments came from Christian buildings.[2] This would make them fourth century at least. A lower limit is provided by the Ahnas group where we found the ornamental types to be generally more developed; and for these we suggested a date in the first half of the fifth century. Now we have seen that at Ahnas the pagan element still prevails and it seems that at that period the Christians had only just begun to make use of this kind of decoration for their buildings. Among the carvings from Oxyrhynchus no sign of Christianity has yet appeared. Nor does there seem to be definite evidence that any of these sculptures belonged to a Christian building. It is, therefore, not necessary to assign to this group a post-Constantinian date.

But even on stylistic grounds one would hardly date these carvings earlier than A.D. 300. The pediments are distinctly degenerate compared with the third-century examples from Baalbeck. Even the most classical example of the 'inhabited' scroll (pl. LXXI, 2) shows signs of decadence when compared with one from Diocletian's Palace in Spalato. The acanthus foliage suggested comparison with that of the friezes at Tell Hum which probably belong to the late fourth century,[3] while some of the capitals were closely related to Palestinian specimens of the same period (see above, p. 188).

Here again no more is intended than to indicate the chronological position of the group as a whole. A number of pieces may be later than A.D. 400, while isolated fragments may be earlier than 300. The majority is likely to belong to the fourth century.[4] So that we are now able to trace a continuous development of decorative sculpture in Egypt from its late classical stage in the fourth century to the highly stylized and genuinely Coptic work found in the monastic buildings of the sixth century.

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[1] Apart from Breccia's finds from Oxyrhynchus which are now in the Museum of Alexandria and are published by him in *Le Musée Gréco-Romain*, 1925–31, pp. 60 ff., pls. 39–51, and *ibid.*, 1931–2, pp. 36 ff., pls. 28–47, there are also sculptures from that place in the British Museum, excavated by Sir Flinders Petrie and partly published by him in *Tombs of the Courtiers and Oxyrhynkhos*, 1925, pls. 45 ff. In addition to these there is a number of carvings from Oxyrhynchus in the museums of Cairo. In the Egyptian Museum: resting Hercules (no. 12–1–30–26; cf. Duthuit, *loc. cit.*, pl. 24 *d*). In the Coptic Museum: niche with figure of Nereid (no. 4475, M. Simaika Pasha, *loc. cit.*, pl. XXII and p. 11; cf. our pl. LXXV, fig. 1); fragment of niche (no. 4418); frieze with vine-scroll (no. 3464); capital (no. 3741); also another fragment of a niche (no. 4301), of uncertain origin, but stylistically similar to the preceding ones.

[2] *Le Musée Gréco-Romain*, 1931–2, p. 44.

[3] Cf. Weigand, *Jahrbuch für Kunstwissenschaft*, 1924, p. 169.

[4] This result helps to confirm what was said above with regard to the decorative friezes of the White Monastery (cf. p. 194, note 4). To judge from the sculptures from Oxyrhynchus, fourth-century style in Egypt is so much more classical than that of the ornaments in the Sohag Monastery that these must be of a date well advanced in the fifth century. One particular type of ornament found at the Monastery, a vine pattern consisting of alternating leaves and bunches of grapes under

In concluding our analysis of the decorative elements in early Coptic sculpture it should be stated that the relationship which was found to exist between these sculptures and the late classical style at Oxyrhynchus provides a strong argument in favour of the belief that Coptic art was originally a provincial offshoot of late antique art in Egypt. Nor are the changes which we found to have taken place between the period of Oxyrhynchus and that of Ahnas out of keeping with the late antique development.

These changes can be summarized under three main heads. The first is that all plant ornament becomes increasingly abstract and conventionalized. This is a phenomenon which can also be observed in the other East Roman provinces during the same period. For the fifth century it is enough to quote the decorative sculptures of Syrian churches and the capitals of the Golden Gate in Constantinople, while the sixth-century work at Bawit and Saqqara may be regarded as a parallel to Justinian's work in Constantinople and Ravenna. Apart from this feature, common to practically all the Mediterranean countries, there is in many of the Coptic ornaments a particularly strong tendency towards simplification and monotonous repetition which makes them recognizable wherever one sees them. This, however, may be regarded as a sign of provincialism rather than originality on the part of the Egyptian craftsmen. The third and most striking feature is the delight these sculptors take in an almost exaggerated contrast of light and shadow, and the decorative effect thus produced. This again has sometimes been called an oriental feature in Coptic art and has been derived from the chip-carving style of the Jewish ossuaries.[1] But the ornament in Egypt is not really chipped. While the surface of the ossuaries is covered with closely set triangular cuts so that the ornament consists of a large number of sharp ridges, the Coptic ornament retains the plastic forms of branches, leaves, fruit, and animals, which are detached from the background by means of deeply hollowed shadows and strong undercutting. The ornament thus seems to float on a black ground of indefinite depth and it is to this 'impressionistic' effect that it owes much of its charm.

It is important to distinguish clearly between genuine chip-carving style and this 'impressionistic' use of shadows as a means of creating air and atmosphere round the carving. While the first is a favourite technique of orientals and barbarians, the second was developed in the classical sphere and is due to the

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intersecting arches, actually occurs at Oxyrhynchus in a more classical and less conventionalized form (see pl. LXXII, 6 and 7).

[1] Cf. Kohl-Watzinger, *loc. cit.*, p. 154.

impressionistic tendencies of the Roman period.[1] It is, of course, not confined to Italy. We find it all over the Mediterranean, for instance on the reliefs of the Arch of Septimius Severus at Leptis Magna, and in Asia Minor on the sarcophagi of the Sidamara group. But it remains essentially a feature of works of classical tradition.

The interplay of light and shadow as found on the Coptic foliage ornaments is of the classical, not of the oriental type. Of course, the more the pattern is conventionalized the more similar is it in effect to the regular abstract pattern which chip-carving produces.[2] But even the most abstract foliage pattern found on our Coptic sculptures still contains that 'optic' and atmospheric element which is a heritage of late classical art. It survives in a similarly regularized manner in Byzantine sculpture of the fifth and sixth centuries.

We conclude that so far as their ornament is concerned Coptic sculptures do not contain anything that is incompatible with the development of late antique and Early Byzantine art in general.

With regard to *figure sculpture* the situation is more complicated. It is only in the sculptures from Ahnas that human figures are to be found in larger numbers. But these are so peculiar in style that they cannot be entirely explained by the general tendencies of the late antique period. On the other hand the figures at Ahnas are not entirely oriental, in the sense of being altogether outside the sphere of classical influence. Most of the subjects are taken from classical mythology. In the carvings of the 'soft' style the connexion with classical sculpture is quite apparent, and even in the 'hard' ones there is still a reminiscence of classical models.

Now sculptures derived from classical sources and yet of a strongly local character had existed in Egypt long before the period of the Ahnas group. There are the mummy masks of plaster, which, in Roman times, are usually shaped after classical models, but often with a strong admixture of oriental features.[3] There are many other sculptures in stucco, which show classical types stylized in a very striking way.[4] There are innumerable terracotta figurines, found in large quantities on practically every Graeco-Roman site in Egypt. The early ones equal the Tanagra statuettes in beauty and refinement, but the later ones, especially the so-called Fayoum terracottas, show

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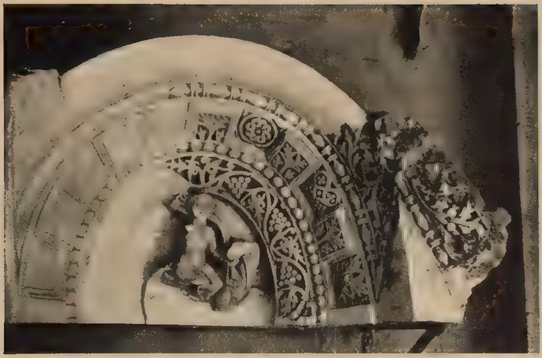
[1] Cf. Val. Müller, *Zwei syrische Bildnisse römischer Zeit. 86. Winckelmannsprogramm der Archäolog. Gesellschaft zu Berlin*, 1927, pp. 29 ff.

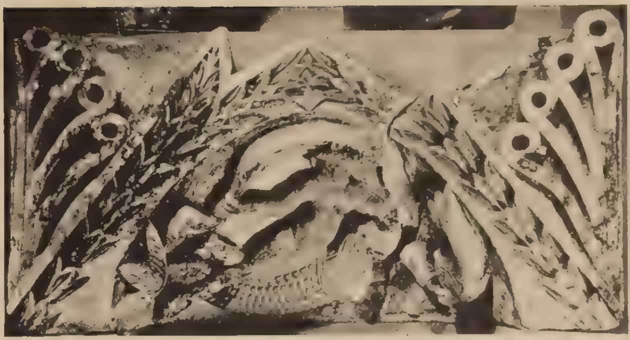
[2] This is probably what Müller means when he says that in the Orient we often find a mixture of the Roman and the oriental principle (*loc. cit.*, p. 30).

[3] C. C. Edgar, *Catalogue Général des Antiquités Égyptiennes du Musée du Caire. Graeco-Egyptian Coffins, Masks, and Portraits*, 1905, pp. ii ff.

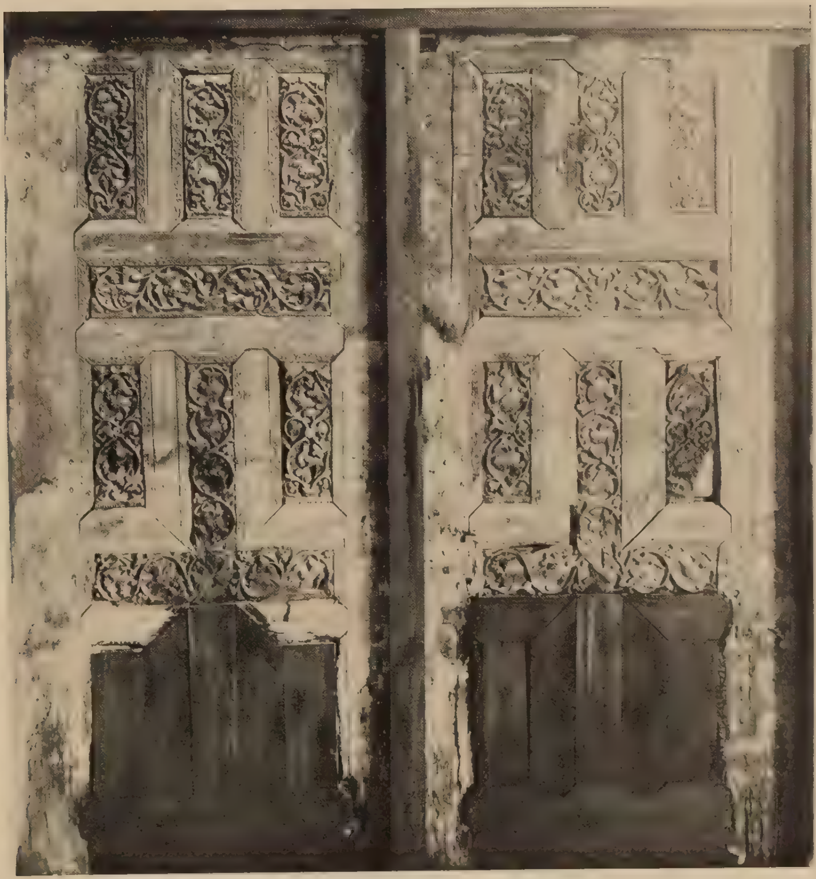
[4] A. Westholm, *The Temples of Soli*, 1936, pp. 203 f.; cf. also *Acta Archaeologica*, vol. v, 1934, pp. 237 f.



1. Niche: Nereid. From Oxyrhynchus. Coptic Museum, Old Cairo, no. 4475



2. Niche: Nereid. From Ahnas (?). Egyptian Museum, Cairo, no. 7289



3. Door from the church of St. Barbara
By courtesy of the Coptic Museum, Old Cairo

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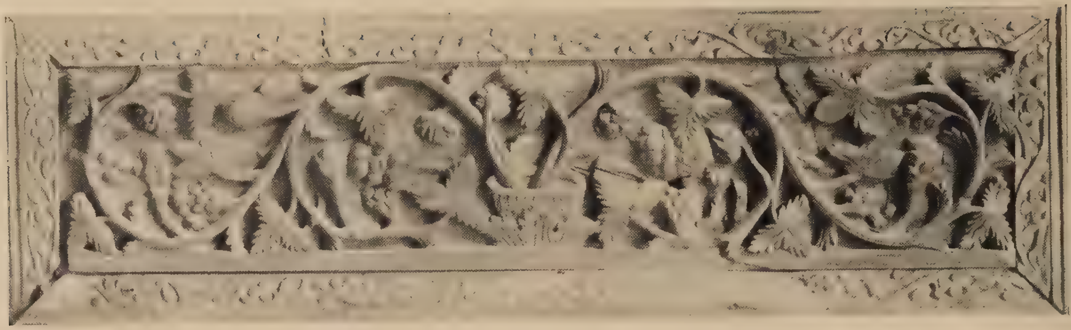
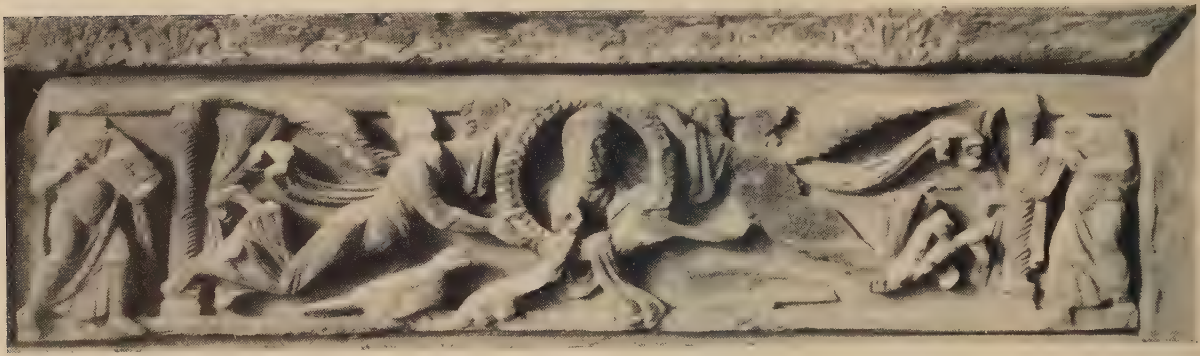
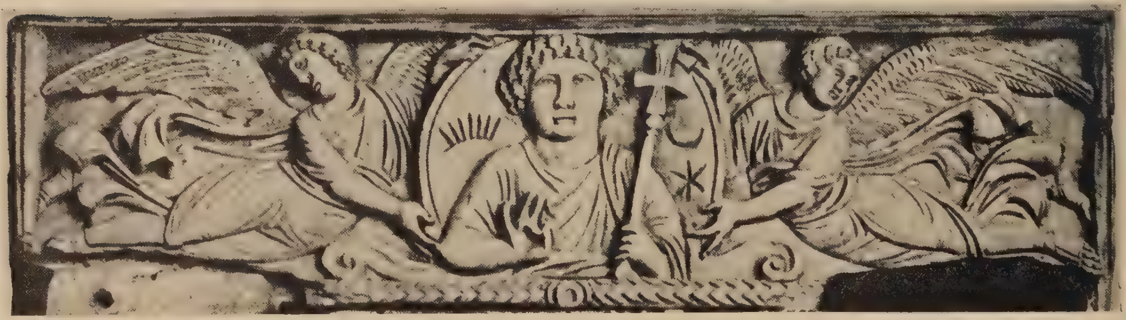


1. Detail from the door of the church of St. Barbara
By courtesy of the Coptic Museum, Old Cairo



2. Detail from the door of the church of St. Barbara
By courtesy of the Coptic Museum, Old Cairo



3. Detail from the 'Barberini' diptych. Louvre

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that this art also sank to a popular level and was modified by many unclassical features.[1]

In all these groups a gradual transformation of classical models can be observed. The development cannot be described as a return to pre-classical, that is to say to ancient Egyptian art, for the art of the Pharaohs was dead. The mere fact that there is, in so many branches of artistic production, a development from a classical to a more and more popular and provincial manner shows that at one time at least the classical models were very familiar to the Egyptian people, that they were adopted everywhere in Egypt and by all strata of the population. Such survival of the ancient Egyptian tradition as can be observed during the Roman period is due to an artificial imitation of an art which was surrounded with an aura of great antiquity and religious significance.

The people adopted Hellenism and emulated it in their own crude and peculiar manner. It is perhaps more correct to say that the works of the Roman period which we just mentioned contain a certain number of Asiatic elements, for instance the stylized eyes and the rigid frontality. But the classical nucleus was never quite obliterated and this provincial art of the Graeco-Roman period is therefore not entirely oriental.

Moreover, its peculiar character is not only due to new and unclassical features being added, but also to the fact that the Hellenistic models were simplified in certain respects, and that some of their features were exaggerated for the sake of expressiveness while others were entirely omitted. Motifs which had long become obsolete in the leading centres of classical art were perpetuated by the provincial craftsmen and mixed with others of later character.

If a label is to be given to this art it is perhaps best described as 'sub-antique'. It is a typical product of a border province of the classical and the oriental world.

A connexion between this 'sub-antique' art of Egypt and Coptic art has been previously suggested by Mr. A. Westholm,[2] but his arguments do not all appear convincing. For instance, he attributes great importance to the sculptures from Kom-esh-Shuqafa, which are however eclectic works, half-Roman, half-Egyptian in style, and which seem to fall under the heading of an artificial revival of ancient Pharaonic style rather than of a spontaneous and historically fertile transformation of Hellenistic models. It may also be doubted whether the Kom-esh-Shuqafa tomb is so typical an example of first-century art in

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[1] E. Breccia, *Terrecotte Figurate Greche e Greco-Egizie del Museo di Alessandria. Monuments de l'Égypte Gréco-Romaine*, vol. ii, 1930–4; cf. introduction to first and second part. For further literature see *ibid.*, part I, p. 25, note 2.

[2] 'Stylistic Features of Coptic Figure Sculpture', *Acta Archaeologica*, vol. v, 1934, pp. 215 ff.; cf. especially pp. 221 ff.

Egypt; whether the early Ptolemaic period was really the only one during which Egypt was an active centre of Hellenistic art, and whether all the work done under the late Ptolemies and under the Romans is either eclectic like the Kom-esh-Shuqafa sculptures, or 'sub-antique' like the figures in stucco and terracotta. Further discoveries on the soil of Alexandria and the other Hellenistic towns may give substance to this claim, but they may also reveal that the Hellenistic interlude is not quite so short as Mr. Westholm suggests, and that the works of 'sub-antique' style play the part of an under-current rather than of a main stream.

Be this as it may, certain features of 'sub-antique' art have indeed helped to form the Coptic figure style. Westholm has shown that the pointed elliptical eye and the stylized curls so frequent among the figures from Ahnas occur in these provincial works, which also often show the sharp ridges typical of the figures of 'hard' style at Ahnas. The way in which the native artist of the Roman period transformed the Hellenistic models is well illustrated by a stucco head from Memphis in the British Museum, where rigid, deeply incised pupils are added to an otherwise purely Greek face (pl. LXXIII, 1).[1] In Coptic art the pupil is often even more accentuated, a deep hole being bored into the eyeball, which is then filled with some coloured material. This technique is very old,[2] but the models nearest at hand would seem to be the mummy masks of plaster.[3]

In stone sculpture we also find features which later on became characteristic of Coptic art. Thus a tomb figure from Canopus shows a treatment of the nude similar to that of the putti on our pl. LXVII, 1, with the forms chipped rather than moulded.[4] A rigid frontal view is customary in a group of tombstones of the Roman period, examples of which have been found at Samallut, Oxyrhynchus, etc.[5] And when we extend our inquiry from the purely stylistic field to that of iconography and types we find that it is again from 'sub-antique' models that our artists received their inspiration. In fact, the somewhat peculiar genre of our Ahnas reliefs had long been in great favour with the Egyptian terracotta artists. Here we meet the figures of classical mythology in that crude and somewhat naïve rendering which is so typical of the Ahnas sculptures. Among them are models for 'Leda and the Swan' and for the 'Birth of Venus' (see pl. LXXIII, 2–5). In the terracottas we also find the patterns for some of the peculiar head-dresses of our female figures and for various other details.[1]

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[1] R. Engelbach, *Riqqeh and Memphis VI. British School of Archaeology in Egypt and Egyptian Research Account, 19th year, 1913*, publ. 1915, pl. LXII, 60.

[2] Cf. Westholm, *loc. cit.*, p. 221, note 12.

[3] Cf., e.g., Edgar, *loc. cit.*, pl. 24, no. 33. 168. Some of the figure-heads on Coptic reliefs, for instance the woman's head on our pl. LXXIII, 7, closely resemble this kind of mask.

[4] E. Breccia, *Monuments de l'Égypte Gréco-Romaine*, vol. i, 1926, pl. 29, 7.

[5] Samallut: Duthuit, *loc. cit.*, pl. II *c*. Oxyrhynchus: E. Breccia, *Le Musée Gréco-Romain*, 1925–31, p. 39, fig. 139.

The importance of the terracotta figurines lies in the fact that they show us entire figures and figure-groups of the same kind as those at Ahnas. They go far to explain the iconography and figure-types of these sculptures. But they do not account for the peculiarity of their forms. They are too small in size and not sufficiently definite in style to be seriously considered as a source of the Ahnas figure-style. It cannot be denied that in this respect Egypt's 'sub-antique' art has so far only yielded parallels for a number of individual features which have had to be collected one by one, and that the Ahnas style as a whole still remains unexplained. We have in fact not found any figure sculptures in Roman Egypt of which the Coptic ones could be regarded as the direct heirs.

'Sub-antique' art, however, existed not in Egypt only, but also in the Asiatic border countries of the Roman Empire. The tomb figures of Palmyra, for instance, which are typical examples of 'sub-antique' art in Syria,[2] have often been quoted in this context, and such details as the drapery of a seated figure in the Coptic Museum have indeed close parallels in Palmyrene art (see pl. LXXIII, 6 and 7).[3] The folds in both cases are rendered in what one may call chip-carving style. It is not the 'impressionistic' technique which we found on the Coptic foliage friezes (see above, pp. 201 f.) with the forms floating on a background of indefinite depth. It is a regular series of ridges effected by a sequence of oblique cuttings. This is a clear case of an oriental element being present in the Ahnas figure style which was absent in the ornamental sculptures. It does not, however, necessarily mean a direct influence of Palmyrene art on the sculptors at Ahnas. The 'sub-antique' arts of neighbouring countries were closely connected with each other, and the chip-carving technique may have been in use in Egypt long before the Ahnas period.

Westholm has also found a certain relationship between Coptic art and the 'sub-antique' art of Cyprus.[4] But here again it remains uncertain whether these are due to a direct connexion between Cyprus and Egypt in the fourth and fifth centuries or to the close contact existing between the two regions in Ptolemaic and Roman times.

Also, it may be assumed that to a certain extent these various groups of 'sub-antique' art resemble each other without being directly connected, for they found their origin in similar sets of circumstances.[1] They all imitated classical art, they all systematized, simplified, and exaggerated certain of its features and deprived them of their organic interconnexion. Moreover, in all of them a certain oriental heritage becomes apparent. So far we are unable, therefore, to do more than connect the style of the Ahnas figures with the 'sub-antique' style of the Near East in general, and cannot point to any particular school by which the Ahnas sculptors might have been influenced.

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[1] The head-dress of the female figure on pl. LXX, 4, may be compared to Breccia, *Terrecotte Figurate . . .*, vol. ii, pl. 46, nos. 227, 230, and the head of Daphne (Duthuit, *loc. cit.*, pl. 22 *a*) to W. Weber, *Die ägyptisch-griechischen Terrakotten*, 1914, pl. 35, no. 383 *a*.

[2] H. Ingholt, *Studier over Palmyrensk Skulptur*, 1928, p. 155.

[3] The similarity of the folds of the cushion on 6 and those of the drapery covering the left leg of the putto on 7 should also be noticed.

[4] *Stylistic Features*, pp. 225 f., and p. 232.

Quite recently, however, a number of sculptures have come to light on Asiatic soil which bear a closer resemblance to those at Ahnas than any of the groups previously mentioned. I refer to the reliefs found by the American School of Oriental Research on the site of the Nabataean temple of Khirbet-et-Tannur.[2] Oriental divinities are here represented in types obviously Hellenistic in origin, but transformed by unclassical features. They are, in fact, very typical examples of that blending of classical, provincial, and oriental features to which we apply the term 'sub-antique'. But the blending in this case results in effects particularly similar to those of the Ahnas carvings.

Take for instance the bust on pl. LXXIV, 2, and compare it with the figure of Atargatis as Grain Goddess from Khirbet-et-Tannur (pl. LXXIV, 1). There is a very close resemblance in the shaping of the eyes with their bulbous pupils surrounded by deep shadows. Also the very coarsely carved mouth, especially the lower lip, is similar in both cases. Fig. 3 on pl. LXXIV offers a comparison with fig. 5 as regards the manner in which the beard is rendered, and with fig. 4 as regards the treatment of the hair.[3] Atargatis as Fish Goddess from Khirbet-et-Tannur (pl. LXXIV, 6) reminds one of the putti carrying a cross on one of the gables from Ahnas; the lower part of the face with the pointed chin and a short slit representing the mouth is particularly similar in both cases (cf. pl. LXVII, 1). Many of the female figures at Ahnas have a peculiar head-dress, their hair being arranged in regular waves on either side of a central parting, and collected near their ears in two thick ropes which fall down to their shoulders (cf. pl. LXXIV, 7). Both the 'Grain Goddess' and the 'Fish Goddess' have this coiffure, and the latter is particularly closely related to a figure of Venus from Ahnas, the ropes of hair being coiled in both cases in exactly the same way (cf. pl. LXXIV, 6 and 8).

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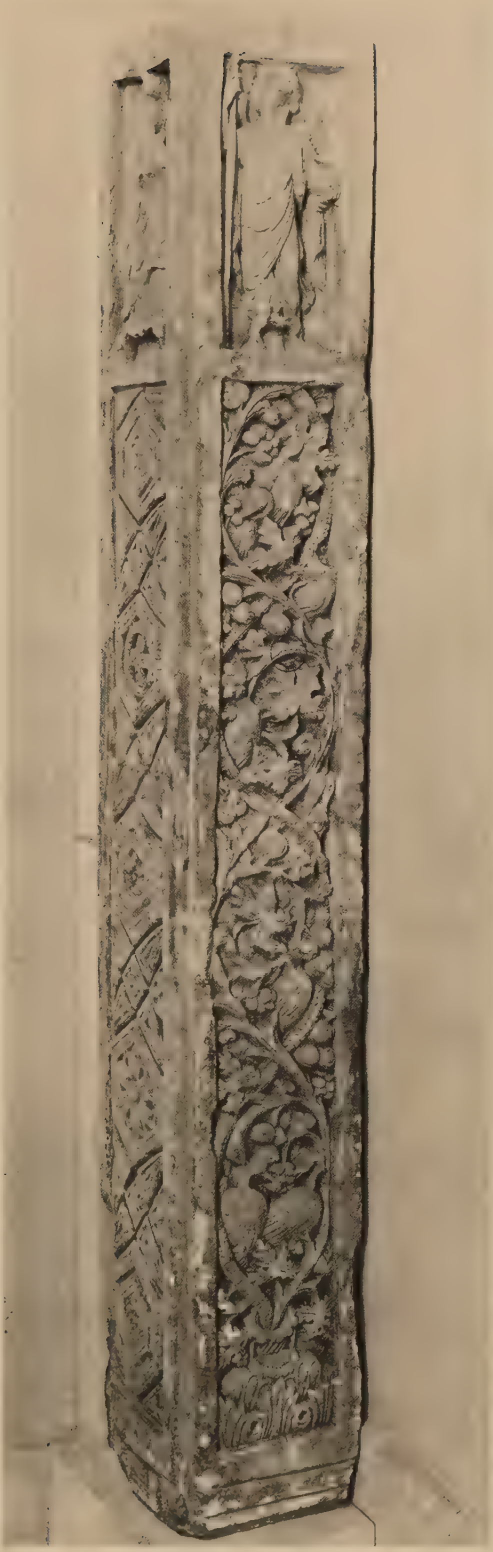
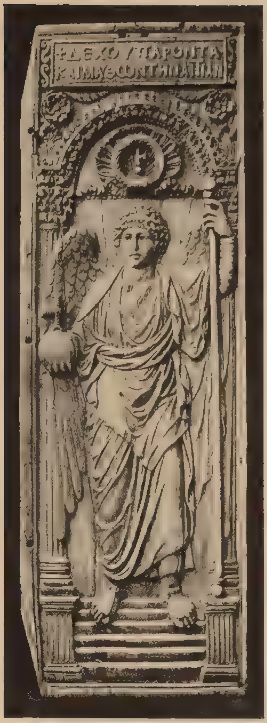
[1] Westholm, *The Temples of Soli*, pp. 204 ff.

[2] *American Journal of Archaeology*, 1937, pp. 366 ff.; *Bulletin of the American Schools of Oriental Research*, nos. 64, 65, 67, 69.

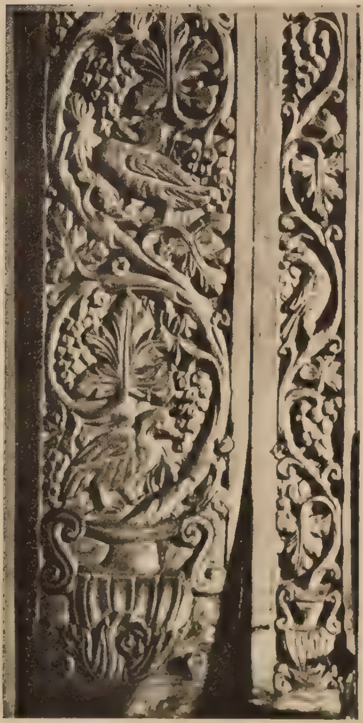
[3] Stylizing of the curls of hair and beard is, however, a feature not entirely confined to Nabataean and Coptic sculpture: it is characteristic of various groups of Eastern 'sub-antique' art. Cf. Westholm, *Stylistic Features*, pp. 231 ff., and *Temples of Soli*, pl. 32, nos. 4, 5; Val. Müller, *loc. cit.*, fig. 12 *c*; W. Andrae, *Hatra*, *Wissenschaftliche Veröffentlichungen der Deutschen Orient-Gesellschaft*, no. 9, 1908, pl. 4.



1. Pilaster from Bawit (?). Louvre
By courtesy of M. C. Boreux


+ΔΕΧΟΥ ΠΑΡΟΝΤΑ
ΚΑΙΜΑΘΩΝΤΗΝΑΙΤΙΑΝ

2. Archangel. Ivory.
British Museum



3. Detail from the chair of
Maximian, Ravenna

Published by the Society of Antiquaries of London, 1938

In all the East Roman provinces we found classical figure types rendered in a crude and hard provincial style, and it seemed that Coptic sculpture, although dependent on this tradition in a general way, could not be convincingly connected with any particular group. Details like these, however, establish within the framework of 'sub-antique' art an especially close relationship between the Coptic and the Nabataean schools which cannot be merely accidental. The parallels usually drawn between Coptic figure sculptures and those of Syria, Persia, and India, are so general that they cannot be taken as proofs of direct Asiatic influence on Coptic art, for they are concerned mainly with motifs which occurred everywhere in the late Roman period, or had in any case been known in Egypt's provincial art since the first centuries of our era. But now there appears to be definite proof of Asiatic influence in the Ahnas figure style, an influence which may go far to explain the hard, conventionalized, and yet expressive faces and attitudes of the figures at Ahnas, and especially of the more developed of them.

Yet we cannot claim to have solved all the problems connected with this style and its history. One of the chief difficulties which still remain is that of the chronological relationship between the Ahnas sculptures and the works in which we find the sources of their style. Of the 'sub-antique' works of art in Egypt the terracotta figurines alone seem to have been produced at a period as late as the fifth century, which we found to be the period of the Ahnas carvings.[1] The history of the plaster masks seems to come more or less to an end during the third century.[2] The figure sculptures in stone and stucco which we quoted likewise belong to the earliest centuries after Christ. This is also true of the parallels from Syria: the sculptures from Palmyra are of the second and the earlier part of the third century, and the new finds at Khirbet-et-Tannur have been assigned by their discoverer to the last building period on that site, which appears to be as early as the second century A.D.[3]

To account for an interval of two or three hundred years separating works so closely similar in style is not an easy matter, and it is hoped that future discoveries will throw some light on this problem. Perhaps that peculiar 'sub-antique' style of which the Nabataean sculptures are an example was still practised in the Syrian hinterland long after the period of Khirbet-et-Tannur. It is less likely that the sculptors at Ahnas should have fallen back on models for their figure style which were many centuries old.

There is also another hypothesis which may help to explain the gap in the chronology. It has often been said that during the third and fourth centuries the provincial styles of the Roman border provinces began to exercise an influence on the development of the official art of the Roman Emperors both in the East and in the West. The new primitivism manifest in works like the friezes of Constantine's Arch in Rome, although in the last resort due to deeper psychological causes, may in fact be taken as a sign of provincial 'sub-antique' style having influenced the artists of the court. Now we possess an eastern and probably even Egyptian variety of this official imperial art, namely the sculptures in porphyry; for porphyry was only quarried in Egypt and in many cases probably also worked there, and it was reserved exclusively for the use of the Emperors.

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[1] Sir Flinders Petrie, *Ehnasya 1904*, 1905, pp. 28 f.

[2] Cf. Edgar, *loc. cit.*, pp. x f.

[3] *Bulletin of the American Schools of Oriental Research*, no. 67, pp. 14, 16.

In these sculptures, too, a hard and conventional style was adopted towards the end of the third century, a phenomenon which is well attested by the two groups of Emperor statues which were probably carved in the East about A.D. 290 and are now one in Venice and one in Rome.[1] Here we see wide-open eyes, clumsy proportions, and angular movements as features of official Roman art. Some elements of the style of these statues have been traced back to eastern 'sub-antique' works such as the sculptures from Palmyra,[2] while the Ahnas sculptures have often been regarded as their followers.[3] In other words, it may be assumed that many features of the 'sub-antique' style of the second and third centuries were transmitted to the Ahnas sculptors not directly but through Roman imperial art. Nevertheless it seems doubtful whether the very special features which the Ahnas figures have in common with those from Khirbet-et-Tannur can have reached the Egyptian province in such a roundabout way.

Another difficulty arises from the fact that none of the groups which offered stylistic parallels to the Ahnas sculptures—neither the 'sub-antique' works from Egypt, Palmyra, and the Nabataean country, nor the late Roman porphyry sculpture—included examples of that peculiar narrative genre which is so conspicuous among the carvings from Ahnas. In this respect the only forerunners were found among the stylistically rather insignificant terracotta figurines. This is one of the main reasons why parallels drawn between Coptic sculptures and those of other countries and periods are seldom quite convincing. How difficult it is, for instance, to imagine what intermediate stage could connect the Porphyry Emperors and our figures of Daphne and Leda, of nymphs, nereids, and putti.

On this problem new light has been thrown by the discoveries made at Oxyrhynchus. It is curious to find that, although they are the direct antecedents of the sculptures from Ahnas, they include very few large-scale figures. At that time it had not apparently become usual to insert such figures into architectural decoration, and it seems that this was a new invention of the period to which the Ahnas sculptures belong. The gables from Oxyrhynchus, like their parallels in Baalbeck, had only small, as it were anonymous, figures which were really part of the ornament. In a later and also architecturally more degenerate gable from Oxyrhynchus we see the figure isolated and at the same time increasingly stylized, notably as to the eyes (pl. LXXV, 1). Another gable, which probably comes from Ahnas, shows this same figure much enlarged and now occupying the whole niche (pl. LXXV, 2). It is a specimen of the 'soft' group at Ahnas, but already possessing the hybrid architectural form of the later Ahnas gables. From here it is only one step to the niche with not merely a single figure but with whole groups and scenes. These scenes had been popular in Egypt chiefly through the light and non-committal creations of the terracotta artists. They now begin to replace the anonymous decorative figures of the Oxyrhynchus gables.

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[1] R. Delbrueck, *Antike Porphyrwerke. Studien zur spätantiken Kunstgeschichte*, vol. 6, 1932, pp. 84 ff., pls. 31–7; H. P. L'Orange, *Studien zur Geschichte des spätantiken Porträts*, pp. 16 ff.

[2] Cf. Delbrueck, *loc. cit.*, p. 25; H. P. L'Orange, *loc. cit*, p. 26.

[3] Westholm, *Stylistic Features*, pp. 222 ff.

The figure scenes from Ahnas are, therefore, without monumental forerunners and this is why they are not easily brought into line with 'sub-antique' or late antique statuary. They show the lively unpretentious types of popular terracotta art translated into the dignified style of monumental stone sculpture. This is why they look as if they were frozen, as if they were petrified. They have been suddenly invested with a dignity to which they were not born and which they can hardly support. They are best explained as a last effort of a dying paganism which is known to have been particularly obstinate in Egypt. The mythological figures and stories which had been familiar and dear to the people for centuries, and whose representations in small figurines had formed part of the furniture of every middle-class house in Egypt, are boldly projected into monumental stone sculpture and given a permanent place in an architectural setting. It is an idea which has no real parallel in late antiquity and certainly none in Early Christian art. When the Early Christian artist wished to insert narrative scenes into an architectural context he executed them in painting or mosaic. To carve them in stone and to amalgamate them with the sculptural decoration is an essentially classical idea and was not really taken up by Christian art on anything like the same scale as in Egypt until the Romanesque period.

Ahnas remained an isolated attempt. The sculptors who were called upon to decorate churches and monasteries tried for a while to christianize this genre (cf. pl. LXVII, 1), but judging from what we know about ecclesiastical architecture in other parts of Egypt, in Saqqara, Sohag, Bawit, and Denderah, the idea did not spread very far and was soon forgotten.

Once it is recognized that the figure sculptures from Ahnas had no direct forerunners we can also understand why the 'hard' style, which was already fully developed in sculptures like those from Khirbet-et-Tannur, had, as it were, to be re-discovered at Ahnas and was preceded by work in a softer and more classical manner. The reason is that an artistic form had to be found for an entirely new genre not previously known to the Egyptian stone-mason. Gradually they adapted the new figures to certain well-established models of which we found the Nabataean sculptures to be the most important ones.

What then are the results of our inquiry into the sources of Coptic sculpture?

Coptic sculpture as known to us from Ahnas, Bawit, and Saqqara is certainly not entirely of foreign origin. Recent finds from Oxyrhynchus have revealed to us the previous history of this kind of architectural ornament on Egyptian soil. They show us that the late classical types of decoration known from Syria, Asia Minor, Spalato, etc. were also well known in Egypt (the parallels with Syria being naturally more striking than the others), and that all the most important types of Coptic friezes and niches were developed in Egypt itself during the fourth and fifth centuries. This development is partly due to the general tendencies of the period, partly also to the increasingly provincial and unpretentious character of the Egyptian craftsmen. But although this explanation covers most of the ornament in early Coptic sculpture it does not do full justice to the figurative scenes which we find at Ahnas. To a certain extent their style can be derived from an undercurrent of semi-classical, semi-oriental art existing in Egypt during the Roman period; but there is also definite proof of influence from the Asiatic hinterland and especially from sculptures like those recently found on the site of a Nabataean temple at Khirbet-et-Tannur. It seems surprising that the figure-work at Ahnas should have a pedigree different from that of most of the ornament by which it is surrounded. But we saw that the figurative scenes are an altogether new element in Egyptian stone sculpture of the Ahnas period, an 'abnormal' feature by which the local evolution from the late antique style of Oxyrhynchus to the 'Byzantine' style of Bawit and Saqqara was temporarily enriched.

III. *Coptic Sculpture and the Alexandrian Tradition*

It remains for us to discuss the problem of Alexandrian art as set out in our introductory remarks. The question arises whether the evolution described in the foregoing pages can be regarded as typical of the entire development of Egyptian art during the fourth, fifth, and sixth centuries, or whether it applies exclusively to the more popular spheres of the hinterland as distinct from the art of the higher classes and especially of the prosperous and cultured inhabitants of Alexandria. These, according to one theory, perpetuated the finest Hellenistic tradition throughout the Christian period in Egypt.

From a geographical point of view all the principal groups which we have been discussing belong to the hinterland. They are all associated with the Nile Valley south of Cairo. But the soil of Alexandria has up to now yielded very little in the way of finds, and the problem can only be approached by asking whether there are anywhere in Egypt signs of a more classical style having survived contemporaneously with the Coptic sculptures of Ahnas and Bawit.

We saw, for instance, that side by side with the acanthus capitals from Ahnas, Bawit, and Saqqara, which we found to be of a local type,[1] there are in Egypt many specimens of a more 'orthodox' character, for example the capitals from the Menas Basilica and a great many others now re-used in the Mosques of Cairo.[2] But these capitals, far from representing the true classical tradition of Alexandria, are quite international and have no more connexion with Alexandria than with Salona, Greece, or Ephesus.[3] In the capitals from Ahnas, on the other hand, we did find a survival of local Hellenistic traditions. There is then, as far as the capitals are concerned, a distinction between local and official art, but the former is more, not less, deeply rooted in the Hellenistic art of Egypt than the latter.

If we look for other evidence of 'Alexandrian' as opposed to Coptic art the numerous carvings in bone and ivory come to our minds. A great number of bone carvings have actually been found on Alexandrian soil, and they probably represent a local Hellenistic tradition.[4] But a reliable chronology of these works has never been established, and to judge by the crudeness with which Hellenistic figures are often rendered on these carvings, they are an argument for, rather than against, the supposition of an early decline of classical style in Alexandria.

There are, however, a number of students who credit Alexandria with all the more important specimens of ivory carving known to us as East Roman work of the fifth and sixth centuries, including the Chair of Maximian in Ravenna and many of the profane and religious diptychs.[5] It is, in fact, chiefly on the evidence of these sculptures that the theory of a survival of Hellenism in Alexandria is based. But since none of them can be definitely proved to be of Egyptian origin they must be regarded as the object of the whole controversy rather than as an argument in favour of one or the other theory.

Searching for more cogent proof of a classical tradition in Egypt's fifth- and sixth-century sculpture we find that there are a few isolated but important works which afford definite evidence of its persistence.

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[1] See above, pp. 187 ff. [2] See above, p. 186. [3] Cf. Kautzsch, *loc. cit., passim.*

[4] E. Breccia, *Alexandrea ad Aegyptum*, 1922, pp. 290 ff., where further literature is quoted. See also *Monuments de l'Égypte gréco-romaine*, vol. i, pl. 44; K. McK. Elderkin, *American Journal of Archaeology*, vol. 30, 1926, pp. 150 ff.; R. Dussaud, *Les Monuments palestiniens et judaïques au Musée du Louvre*, 1912, no. 120.

[5] Cf., e.g., E. Capps, Jr., in *Art Bulletin*, X, 1927, pp. 61 ff., especially pp. 70 ff.

Perhaps the most important one of these is the wooden door from the church of St. Barbara in Old Cairo, now in the Coptic Museum not far from that church (pl. LXXV, 3, pl. LXXVI, 1 and 2).[1] Here scroll work and figures are of a style entirely different from that of the Coptic sculptures. The vine foliage is natural, rich, and elegant, the figures and their garments are of a classical type, the whole carving is soft and smooth. The door has been published as a fourth-century work,[2] and if this date be accepted it would be prior to the evolution of a definitely Coptic style in fifth-century sculpture, and would not prove anything for or against the survival of Hellenism after the fifth century. But the two pairs of flying angels on one side of the door are closely similar in style to those on fifth- and sixth-century ivory diptychs. They can, for example, be closely compared with the angels on the so-called Barberini Diptych (see pl. LXXVI, 2 and 3), which is hardly earlier than A.D. 500.[3] The foliage on the other side of the door is somewhat similar to that on Maximian's Ivory Chair in Ravenna, which has the same smooth round stem and the short curly offshoots projecting from it (see pl. LXXVI, 1, and pl. LXXVII, 3). Maximian's Chair is of much the same date as the Barberini Diptych.[4]

These comparisons are significant for two reasons. First of all they prove that the door of St. Barbara does not belong to the fourth century, but to a period about A.D. 500;[5] and secondly they show us that at that time there were sculptors in Egypt who worked in the classical manner of the ivory carvers and not in the Coptic style of Ahnas.

Strangely enough, there is apparently one isolated find from Bawit which tells the same story. This is a limestone pilaster now in the Louvre[6] which is said to come from that monastery, and which is carved on one side with a geometric ornament of hexagons, on the other with a beautiful and delicate design of vine scrolls and birds, very much in the style of Maximian's Chair (cf. especially the vase with the stem growing out of it: pl. LXXVII, 1 and 3). Here the resemblance to the ivory style is very striking indeed, and it seems almost redundant that there should be on this pilaster in addition to the ornamental design a figure of an angel very similar to that on the famous British Museum Ivory (pl. LXXVII, 2) which again belongs to the group of early sixth-century diptychs.[1] The Paris Pilaster must also belong to the early sixth century, and, supplementing as it does the evidence of the St. Barbara wood-carvings, it inevitably leads us to the conclusion that at that period there existed in Egypt another school apart from the Coptic, which carried on the Hellenistic tradition at its most refined.

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[1] A. Patricolo and U. Monneret de Villard, *The Church of Sitt Burbâra in Old Cairo*, 1922.

[2] *Ibid.*, p. 50.

[3] Cf. G. Duthuit, F. W. Volbach, G. Salles, *Art Byzantin*, 1933, p. 42, where the more recent literature is given.

[4] C. Cecchelli, *La Cattedra di Massimiano ed altri avorii romano-orientali*, 1937.

[5] Such a date has been previously suggested by K. A. C. Creswell, *Early Muslim Architecture*, vol. i, 1932, p. 388, n. 9.

[6] *Musée National du Louvre. Département des Antiquités Égyptiennes, Guide-Catalogue Sommaire*, by C. Boreux, 1932, vol. i, p. 278; *Rivista di Archeologia Cristiana*, 1932, pp. 62 f.

It seems, therefore, that those who believe that there was an Alexandrian art side by side with Coptic art are right. But is it really the old Hellenistic style of Alexandria which we see here surviving in sixth-century carvings? Was the noble tradition never interrupted? Was that town even in this late period a centre to which patrons from all countries turned when they wanted work done in the finest Greek style?

Of this we are not sure. We must not forget that the door of St. Barbara and the Paris Pilaster are practically isolated works.[2] It is at present impossible to judge whether they really represent a school, an organized centre, and an important power in the life and art of Egypt during the sixth century. Still less can we say that Egypt had all along been such a centre, that here a genuine Hellenistic tradition was preserved through all the crises of the Late Roman and Early Christian period. In this respect we even have certain evidence indicating that the contrary is true.

In the second part of this paper we discussed, if only in a summary manner, the achievements of Egyptian artists in the early centuries of our era. We saw that in many branches of art classical tradition was abandoned at an early date in favour of a local style.[3] We said that this local style was perhaps only an undercurrent, and that there may have been during the same period other artists who still adhered to classical standards.[4] But in any case there is a large group of works which show decline setting in at an early date: the mummy portraits, the terracotta figurines, and the stucco sculptures.

We also found traces of official imperial art such as the porphyry sculptures and the capitals of the Menas Basilica, and we saw that here too the classical style was abandoned, although not until we reach the last period of Roman rule.[1] This, however, may have been a course of events which only affected the sphere of the court, it may have been a manner imposed on the Egyptian sculptors from outside by the taste of their foreign rulers, and a Hellenistic tradition may still have survived in Alexandria side by side with it.

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[1] Cf. E. Weigand, *Kritische Berichte zur kunstgeschichtlichen Literatur*, vols. iii–iv, 1930–1 and 1931–2, p. 56. It should, however, be mentioned that some students regard this ivory as a work of *c.* A.D. 400; cf. R. Delbrueck, *Die Consulardiptychen*, 1929, p. 28. E. v. Garger, *Jahrbuch der kunsthistorischen Sammlungen in Wien*, N. F., vol. viii, 1934, p. 15, n. 103.

[2] Two more pilasters in the Louvre, apparently similar to ours, and also coming from Bawit, have been described by J. Clédat (*Bulletin de l'Institut français d'archéologie orientale*, vol. i, 1901, pp. 90 f.) and by J. Strzygowski (*Bulletin de la Société archéologique d'Alexandrie*, vol. v, 1902, pp. 39 ff.). I have not been able to find them. Apart from these works there are only second class imitations of this style, such as a woodcarving from El-Moallaqa (M. Simaika Pasha, *loc. cit.*, pl. LXVII, pp. 26 f), and reliefs of flying angels from Bawit and other places (Duthuit, *loc. cit.*, pls. XII, XIII), which show the St. Barbara models rendered in a strongly provincialized form.

[3] See above, pp. 202 f.

[4] See above, pp. 203 f.

But between these two extreme groups, that of 'sub-antique' and that of imperial art, there was a third one represented by the sculptures from Oxyrhynchus. In these we found international late antique style, but with certain local peculiarities.[2] It is difficult to imagine that we do not here at last possess a typical example of fourth-century sculpture in Egypt. The execution may be inferior, but typologically speaking the Oxyrhynchus sculptures belong to a large group spread over Syria, Asia Minor, North Africa, and Dalmatia, and changing only in certain details as we pass from one region to the other. It is well-nigh impossible to exclude Alexandria from this group. Even if only in a provincial reflection, we nevertheless perceive Alexandrian art in the sculptures from Oxyrhynchus. Students of town planning have for a long time maintained that provincial Greek towns in Egypt were laid out on the model of the great capital.[3] This must certainly apply to the sculptural decoration too.[4]

Now there is no apparent connexion between Oxyrhynchus and the St. Barbara group. The vine scrolls on the door and on the Paris Pilaster are not derived from those which Breccia and Sir Flinders Petrie have published, and the figure types which we see on the door are not represented among their finds. The types of the St. Barbara sculptures are not the direct descendants of those at Oxyrhynchus. In fact we know that the Oxyrhynchus tradition developed in quite a different direction, namely towards the Coptic style of Ahnas, Bawit, and Saqqara.

This is of course not an absolute proof that the door of St. Barbara, and with it the ivory carvings of the sixth century, was not rooted in the classical art of Egypt. But it is a strong argument against such a thesis. It would be strange if the same tradition whose gradual decline we can so plainly follow in the sculptures of Oxyrhynchus, Ahnas, and Bawit, had at the same time produced such highly refined work as the Paris Pilaster and the ivories, and it is for this reason that students who believe in the importance of Christian Egypt as a stronghold of Hellenism usually maintain that Coptic art is entirely a derivative of a foreign school. But since we have seen that Coptic art can be linked up with Alexandria, while there is as yet no sign of the St. Barbara door or the ivories having any forerunners in Egypt, it is reasonable to assume that it is the St. Barbara style, and not the Coptic style, which represents an element foreign to the Egyptian tradition.

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[1] See above, p. 186.

[2] See above, pp. 198 f.

[3] Cf. E. Weigand, *Wiener Jahrbuch für Kunstgeschichte*, vol. v, 1928, pp. 81 f., where further literature is quoted.

[4] Breccia in his publication of the Oxyrhynchus sculptures, has also derived them from Alexandrian Hellenism (*Le Musée Gréco-Romain*, 1931-2, p. 45).

Some of the ivories, especially the Consular Diptychs, are closely connected with the art of the Imperial Court. There must have been, under the patronage of the Emperor, a school which worked in the finest Hellenistic manner and lived in a kind of perpetual renaissance. It was an international style not connected with any particular province, and waves of it must have reached Egypt from time to time. The basket capitals found at Bawit and Saqqara[1] are an obvious example of Byzantine court art influencing Egypt in the sixth century. The style of the St. Barbara door and of the Paris Pilaster must be explained in a similar way. We cannot call it an Alexandrian style. The artists who did such work in Egypt in the sixth century must have been trained in the court atmosphere of Byzantium. If we want to see what had by that time happened to Egypt's own tradition of Hellenistic art, we must not look at these few and isolated monuments, but at the genuinely Coptic sculptures in the monasteries of the Nile Valley.

In my researches on Coptic sculpture, and in the special task of writing this paper, I have benefited by the most generous help extended to me from many different quarters. I am particularly indebted to His Excellency M. Simaika Pasha, Mr. Guy Brunton, and Mr. Togo Mina, who gave me every facility and much useful information during my work in the museums of Cairo. In the Louvre I was assisted with great kindness by Mlle Christiane Desroches and M. J. Vandier. M. C. Boreux, Père M. R. Savignac, the German Archaeological Institute in Berlin, and the Coptic Museum in Cairo have all very kindly supplied me with photographs, and I am extremely grateful to Prof. A. Adriani, who sent me a splendid series of prints of the sculptures from Oxyrhynchus, and to Mr. Nelson Glueck, who put at my disposal photographs of his finds from Khirbet-et-Tannur. In writing the paper I received much valuable advice from Mr. T. D. Kendrick, Dr. F. Saxl, and especially from Miss Elizabeth Senior.

But most of all I have to thank the generous benefactor of science and learning who, by endowing a munificent scholarship, enabled me to visit Egypt, and to carry out the studies on which this paper is based.

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[1] See above, p. 190.

VII.—*Excavations at Kusura near Afyon Karahisar: II*

By WINIFRED LAMB, *M.A., F.S.A.*

INTRODUCTION

Abbreviations used in this paper

A.J.A. = *American Journal of Archaeology.*
BK.K = Bittel, *Bogazköy, die Kleinfunde der Grabungen 1906–1912*, I.
B.M. Cat. = *Catalogue of the Greek and Etruscan Vases in the British Museum.*
Bogazköy, Neue Untersuchungen = Bittel, *Bogazköy, Neue Untersuchungen in der Hethitischen Hauptstadt.*
B.S.A. = *Annual of the British School at Athens.*
O.I.P. = *Oriental Institute Publications.*
(*O.I.P.*, xix = E. F. Schmidt, *The Alishar Hüyük, Seasons of 1928 and 1929*, Part I, called *A.H.I.* in *Archaeologia*, lxxxvi)
(*O.I.P.*, xxviii–xxx = von der Osten, *The Alishar Hüyük, Seasons of 1930–32*)
P.F.K. = Bittel, *Prähistorische Forschung in Kleinasien.*
S.S. = H. Schmidt, *Heinrich Schliemann's Sammlung Trojanischer Altertümer.*
Thermi = W. Lamb, *Excavations at Thermi in Lesbos.*
Türk Tarih = *Türk Tarih, Arkeologya ve Etnografya Dergisı.*

Note

In referring to the periods at Alişar, I use the old terminology: Alişar I for the 'Copper Age', Alişar III for the 'Early Bronze Age', Alişar II for the 'Period of the Hittite Empires' which began a little later than Alişar III. This terminology conforms to the practice in *Archaeologia*, lxxxvi, 1 ff., and avoids misapplication of the expressions 'Copper' and 'Bronze Age'.

AT the outset of the 1937 excavations, we had certain main objects in view. The most important, since it affected the history of Anatolia as a whole, was to decide what culture was represented by our third and latest period, called C. The particulars wherein C differed from the preceding periods, B and A, were obvious: during B, which may have come to an end in the twentieth century,[1] the settlement clearly belonged to the 'west Anatolian group', known from Troy, Lesbos, Yortan, and the Pisidian sites; A could be regarded as an earlier stage of B, not yet modified by western influence (see p. 237, below); C, however, seemed hard to parallel. The acquisition of fresh material, and a careful study of the collections in the museums at Ankara and Istanbul has now enabled us to recognize C as Hittite in the wide sense of the term used by archaeologists to-day. The C pottery has many points in common with the monochrome Hittite wares of Alişar II, Alaca Hüyük, Haşhüyük and even Bogazköy, while the smaller antiquities from C and Alişar II are much closer than was previously supposed. That Kusura should display local peculiarities is not surprising, when we consider its distance from the larger Hittite centres.

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[1] *Archaeologia*, lxxxvi, 4.

The second of our aims was to unite the main areas dug during the seasons of 1935 and 1936 in a way that would show their proper stratigraphical relationship. It will be remembered that in 1936 our knowledge of the remains, architectural and otherwise, belonging to period C was derived from a complex of buildings and their context on the summit of the mound. These buildings had not been brought into direct connexion with any of the test pits, nor with area V which had yielded the most comprehensive evidence for period B. In consequence, we could not tell how many layers, or estimate how much time, separated period B from the buildings in question. To obtain the necessary links, we dug pit XII to virgin soil, and cleared the upper levels of areas X, I, and XI (pl. LXXVIII). Pit XII extends area VII as far as the cliff face which marks the edge of the mound on the north, a position convenient for dumping, and, we hope, not liable to embarrass future excavation. Areas X, I, and XI join areas III and VIII to area V, superficially indeed, but sufficiently to reveal the sequence of the upper strata (pls. LXXVIII, LXXIX).

The third item on our programme was the recovery of house-plans or, failing these, complete rooms belonging to the two earlier periods, A and B. By enlarging area V and opening out the adjacent area XI, we brought to light a number of rooms and the successive stages of a street which, variously modified, were in use throughout period B. How far the rooms can be combined into houses is, with one or two exceptions, matter for speculation. Concerning period A, we are no better informed than we were at the end of 1936, for the parts of areas V and XII dug to virgin soil yielded nothing which could be attributed to A except a small proportion of the potsherds.

Investigating the site on the lines I have described, we made several discoveries which caused us to enlarge the scope of our operations. In particular, certain walls in area X, proved of such interest that we devoted considerable time and labour to their exploration, not only in area X, but in the neighbouring plots VIII and III. The massive and extensive structures thus revealed may represent the fortification of the citadel: their nature and function are discussed on pp. 230–5 by Miss Clay (Mrs. Maxwell-Hyslop), who was responsible for this section of the work.

Once more, I have great pleasure in expressing our thanks to the Government of the Turkish Republic for the facilities granted to the expedition, and in acknowledging our deep obligation to H. E. Saffet Arikan, Minister of Education, and Dr. Hamit Koşay, Director of Antiquities and Museums. We are indebted not only for the renewal of the permit but for many other kindnesses which include the placing of the village school at our disposal for residence. We remember with appreciation the help given by Vali of Afyon

and the Kaymakam of Sandıklı on many occasions during our visit. Bay Süleyman Gönçer, Director of the Afyon Museum, acted as Commissioner, and we owe much to his experience, his assistance, and his courtesy. Further thanks are due to the Wortz Fund at Cambridge for a grant towards excavation expenses, and to Mr. A. L. Reckitt for his generosity in giving financial support.

Work was carried on during the months of June, July, and August, the staff being composed of myself, Miss Clay, Miss Six, and Mr. Macartney. Miss Clay was in charge of areas X, III, and VIII, and investigated the important structures believed to be fortifications (p. 230). She also helped with the mending of the pottery. Miss Six had the care of the finds, which she not only recorded but also cleaned, mended, and restored, besides drawing many of the potsherds. Mr. R. H. Macartney, A.R.I.B.A., acted as architect and drew the antiquities. All the plans, sections, and other illustrations in this paper, except figs. 1, 6, 14, and parts of 3 are by his hand.

The Buildings and Deposits

The earliest period in areas V and XII

Part of area V (fig. 1) was cleared to virgin soil,[1] a firm gravel overlaid in the south-eastern corner with clay. Here the ground rose, as one would expect from the contours of the site. The levels at which virgin soil occurred were 88·8 m. in the north-west, 88·48 m. in the south-west, 88·58 m. in the north-east, and 89·4 m. in the south-east.[2]

A small jug, pl. LXXXIV, 2, and numbers of sherds lay just above the gravel, but only three or four of these sherds belong definitely to class A (*Archaeologia*, lxxxvi, 14–16), the rest being typical early B wares, while the vase is indefinite.

At the edge of the clay, not far from the south-eastern corner, was a patch of ash, but both ash and gravel were covered by a curious deposit, unlike anything I have encountered elsewhere. This deposit was composed of earth so hard that to break it was an effort; so stiff that it came away in large chunks; and with a strong, sour smell that was extremely disagreeable. The upper parts were brown, the lower parts black, and both contained some animal bones, a few sherds, and quantities of wood in excellent preservation, often showing the shapes of the original twigs and branches.[3]

Pit XII, where virgin soil was reached at 90 m., produced a similar deposit between 91·9 and 92·2 m.: here too were scanty potsherds and many pieces of wood. Below the hard deposit was a stratum not encountered in V, of soft earth, equally poor in pottery. The few fragments which it yielded were in bad condition, and seem to be either of the early B type, or transitional between A and B.

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[1] The part of area V dug to virgin soil was in the middle of the area, and does not, therefore, appear on all the sections of the sides of this area in pl. LXXIX.

[2] For the artificial datum at 100 m., near the top of the mound, and the actual heights above sea-level, see *Archaeologia*, lxxxvi, 3, note 1.

[3] The wood is being examined by Miss Bancroft.

How are we to explain the hard deposits and the wood? Marshy ground might have caused the hardness, but would hardly be consistent with a drop of about 2·5 m. between pit XII and area V. The wood might have grown on the spot, but we saw no trace of roots; alternatively, it might have been the result of a brushwood hedge for a sheepfold, in which case the presence of animals would have made the soil stiff and smelly. Analysis may throw light on this problem. It is significant that pit I, dug in 1935 to virgin soil between XII and V, held nothing so abnormal; nor did area II,[1] where virgin soil was struck in 1936.

The scarcity of A wares is vexing and leaves us in doubt as to where the earliest occupants of the site lived. It will be remembered that their handiwork was well represented last year in area II on the north-west of the settlement: there was, however, no sign of it in pits I, IV, and IX. We also have reason to believe that they were buried in the cemetery on the ridge opposite the town site. Perhaps they established themselves only on the north-western slope of the mound, or in the valley at its foot, or in some place not yet explored.

Period B

Less than half a metre separated the hard deposit in V from the foundations of the earliest dwellings which we discovered. One of these was part of a rectangular room in the north-west corner (pl. LXXX, 7; fig. 1). It had a cobbled floor at 90·04 m.; the lower courses of the walls, of stone plastered with mud, descended only a little way below the floor-level. The walls of a contemporary building projected into the south-west corner of V. They had stone foundations faced outside with mud, and a superstructure of mud-brick whitewashed inside. The door was on the east; the floor, of hard, beaten earth, was at 90·15 m. For two seasons we had been clearing walls and an entrance on exactly the same spot, since the room (3 on our plans) was reoccupied again and again, fresh floors being laid down and higher courses added to the walls until the end of period B. One would infer that this period had not lasted overlong were V the only measure for the settlement, but in estimating the duration of B, the higher portions of the mound must be taken into consideration.

At 90·53 m. in room 3, another floor indicated a second stage, to which belonged a hearth-base, of burnt earth, outside the door. Elsewhere the soil was damp and dark, and contained splinters of wood, though not nearly as many as were found in the stiff deposit above virgin soil. The damp layers continued upwards to about 91·8 m. Near the eastern edge of area V there were two floors at 90·7 and 91·8 m., on each of which a hearth had been built: the lower floor and hearth can be seen in fig. 1, and the higher ones were directly above them.

Stage three, a composite one, is illustrated in fig. 2. A larger space, cleared down to a series of floors at or a little above 92 m., presents to us a small sample of the architecture of the town, less informing than the more extensive collection of buildings depicted in figs. 3 and 4. We know, of course, that all the floors in fig. 2 cannot be exactly contemporary,[2] but we believe them to be approximately so because they form a distinct

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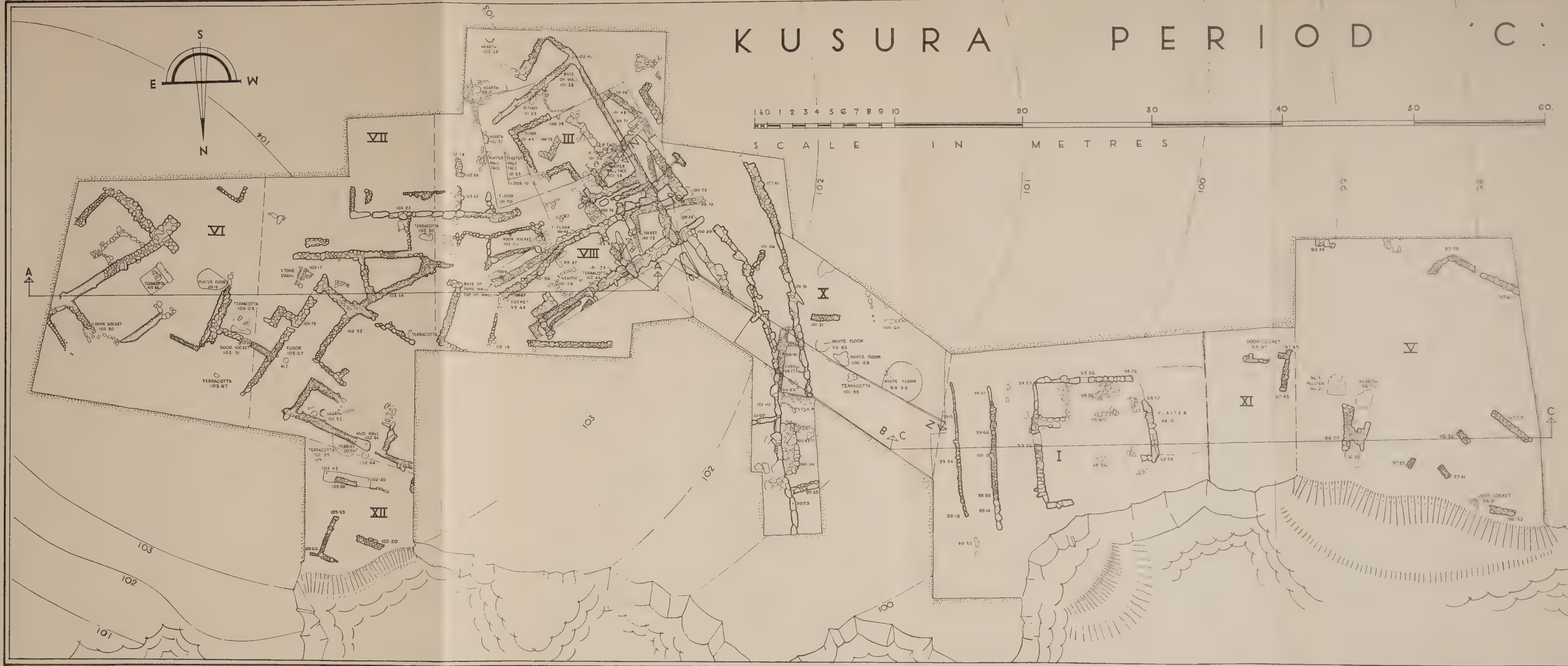
[1] *Archaeologia*, lxxxvi, 6–8.

[2] Rooms 5 and 8*b* have not been dug below 92·40 m., so low floors have not been recorded in either.


KUSURA PERIOD 'C'
S
E
W
N
1½0 1 2 3 4 5 6 7 8 9 10 20 30 40 50 60
SCALE IN METRES
VI
VII
III
VIII
X
XI
I
V
XII
A
A
B
C
C
TERRACOTTA
DOOR SOCKET
PLASTER FLOOR
STONE DRAIN
FLOOR
PIT
HEARTH
MUD WALL
PEBBLES
BASE OF WALL
WHITE FLOOR
OVEN
PLASTER
105
104
103
102
101
100
99
98

Kusura: period C. Plan

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group, while the higher groups in fig. 3 belong to a phase when some of the houses have been remodelled. The publication of only four plans to illustrate the remains in V involves the making of attributions and combinations which may seem arbitrary, but the author and the architect hope that they have given the reader sufficient evidence for him to form his own opinion. I should add that rooms 8–10 are called area XI, and rooms 3, 5, and 7, area V: so too the street, no. 4, and the unnumbered 'court' north of it. Street and court separated the rooms in V from those in XI, where floors were often a little higher than corresponding ones in V.

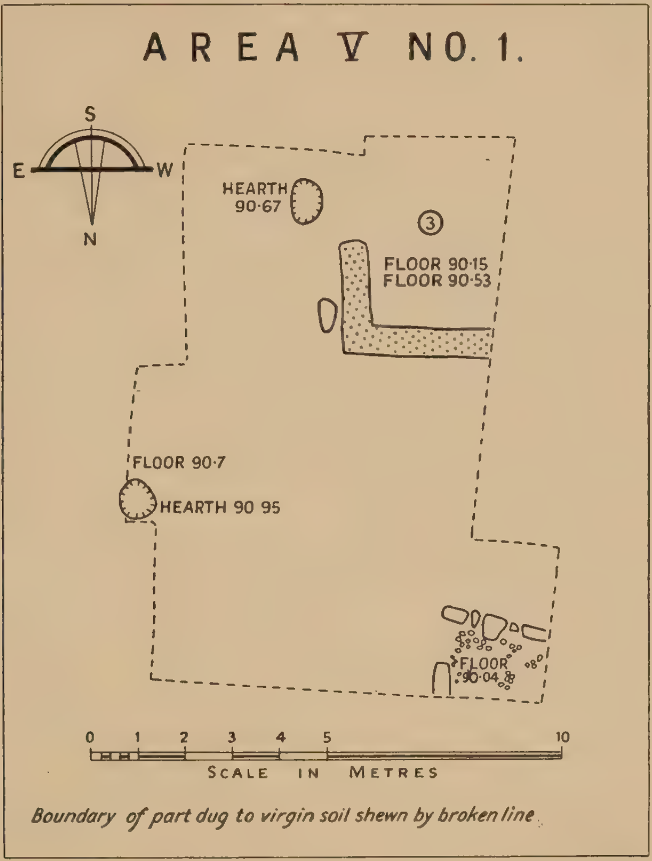

AREA V NO. 1.
S
E
W
N
HEARTH 90·67
③
FLOOR 90·15
FLOOR 90·53
FLOOR 90·7
HEARTH 90 95
FLOOR 90·04
0 1 2 3 4 5 10
SCALE IN METRES
Boundary of part dug to virgin soil shewn by broken line

Fig. 1. Area V, period B, stages 1 and 2

The street gave access to room 3 only; 5 was entered from the south side, close to the wall of our pit; 10*b*, approached from the 'court', led to 9*b* and *a*, but we could detect no door in 7. Room 8*a* had a double wall on the west: that the inner part, drawn with a dotted line, was a later addition, perhaps a reinforcement, was shown by the way the whitewash on the north and south walls ran behind its two ends, continuing inside the outer wall. The west wall of room 10*a* is dotted because it was badly preserved: being much softer and less distinct than other walls, and not whitewashed inside, it was difficult to plan, though it was visible in elevation in 1936, and we traced part of its base in 1937.

I think that it must originally have continued northwards to enclose 10 *b*, for porches with antae are not otherwise known on the site. We need have no hesitation in saying that 10 *b*, 9 *a*, and 9 *b* were part of the same house—a house of the type where rooms could be connected by doors in the long side walls.

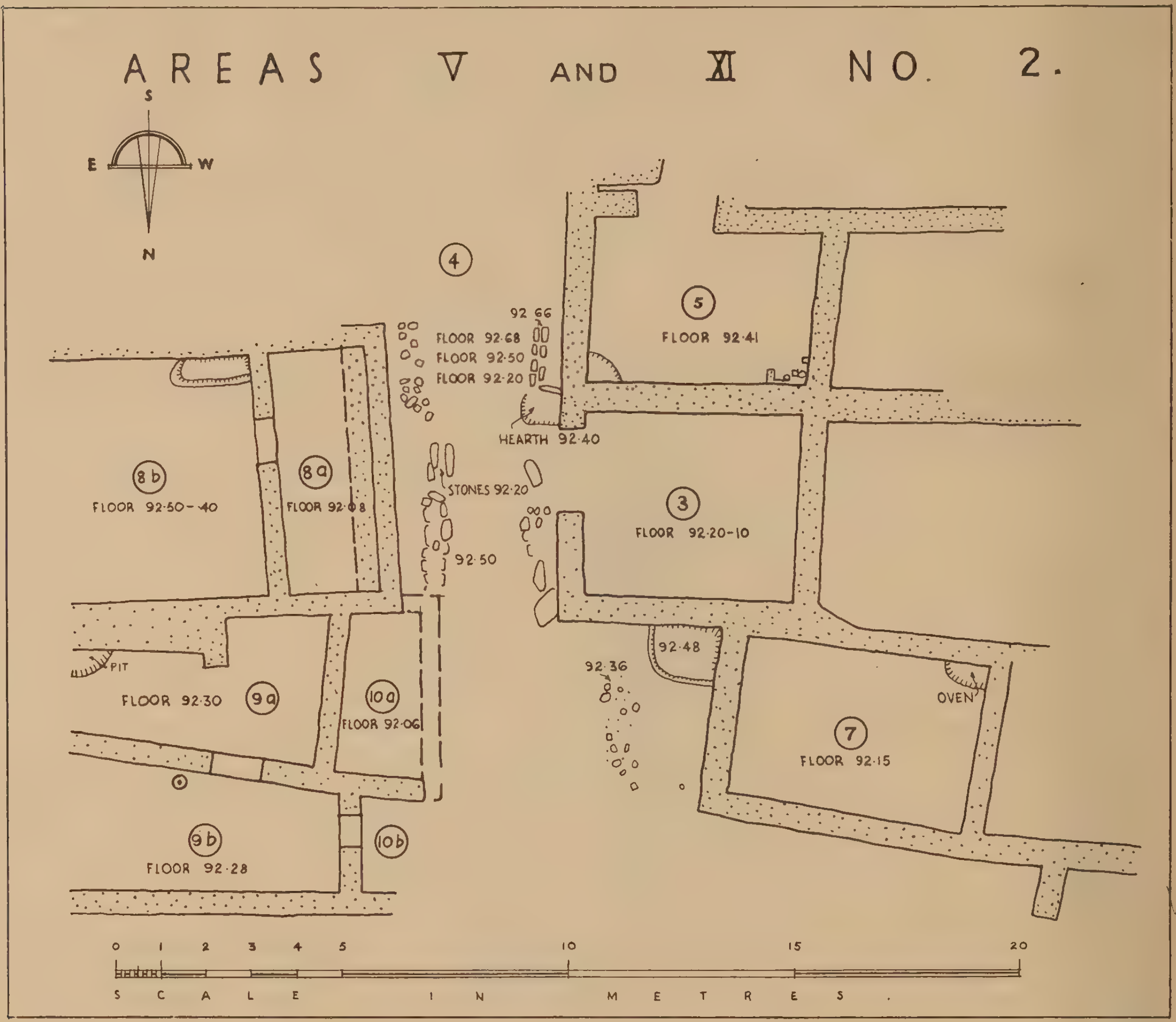
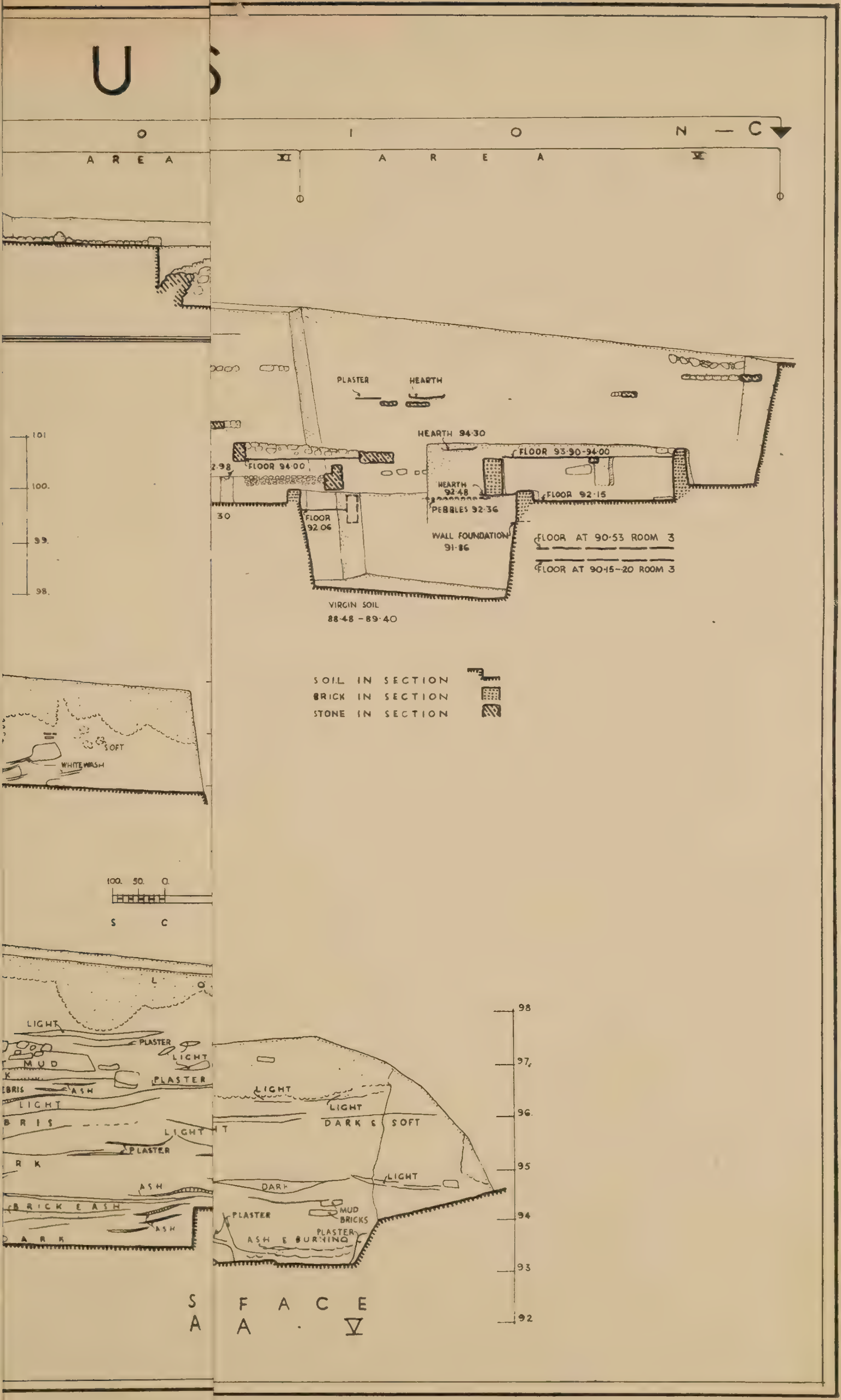

AREAS V AND XI NO. 2.
S
E
W
N
4
92 66
FLOOR 92·68
FLOOR 92·50
FLOOR 92·20
5
FLOOR 92·41
HEARTH 92·40
8b
FLOOR 92·50–·40
8a
FLOOR 92·08
STONES 92·20
92·50
3
FLOOR 92·20–10
92·48
92·36
PIT
FLOOR 92·30
9a
10a
FLOOR 92·06
OVEN
7
FLOOR 92·15
9b
FLOOR 92·28
10b
0 1 2 3 4 5 10 15 20
SCALE IN METRES.

Fig. 2. Areas V and XI, period B, stage 3

In the north-east corner of room 5 was a hollow, 0·12 m. deep, full of red and black matter as though ashes had lain there. Rooms 8*b* and 9*a* also contained shallow depressions filled with soft earth, the one in 8 *b* being lined with hard mud. The little excrescence in the north-west corner of room 5 was too badly preserved for us to judge what it represented; there was a terracotta patch, the remains of a hearth, against the north wall, below the one at 93·2 m. on fig. 3. Room 7 was furnished with an oven of the 'beehive type', with the dome projecting backwards into the wall, a terracotta floor resting on


U S
O I O N — C
AREA
XI AREA V
PLASTER
HEARTH
HEARTH 94·30
FLOOR 93·90–94·00
2·98
FLOOR 94·00
HEARTH 92·48
PEBBLES 92·36
FLOOR 92·15
30
FLOOR 92·06
WALL FOUNDATION 91·86
FLOOR AT 90·53 ROOM 3
FLOOR AT 90·15–20 ROOM 3
VIRGIN SOIL 88·48 – 89·40
101
100.
99.
98.
SOIL IN SECTION
BRICK IN SECTION
STONE IN SECTION
SOFT
WHITEWASH
100. 50. 0.
S C
L O
LIGHT
PLASTER
LIGHT
MUD
K
PLASTER
EBRIS
ASH
LIGHT
LIGHT
B R I S
LIGHT
LIGHT
DARK & SOFT
R K
PLASTER
LIGHT
ASH
DARK
BRICK & ASH
PLASTER
MUD BRICKS
ASH
PLASTER
ASH & BURNING
D A R K
98
97
96.
95
94
93
92
S F A C E
A A · V

pebbles, and half a pot embedded in the hard debris above the oven-floor. The street, no. 4, had several strata: one, part stones, part earth, at 92·2 m., with a hearth at 92·4 m. against the west wall and scattered stones along the eastern side; one, at 92·50 m. when the hearth was still in use; one at 92·68 m. The hearth was finished off with a high slab at the south side, behind which was a low wall, the top of which (at 92·66 m.) looked like paving when the 92·68 m. level was uncovered. The small enclosure at 92·48 m. in the 'court' has been described in *Archaeologia*, lxxxvi, 10, and illustrated *op. cit.*, pl. III, 4. To the 92·30 m. floor in 9*a* belonged a shelf or bracket on the south wall (pl. LXXX, 4), made of mud-brick and impossible to explain. As the top of the bracket was actually at 92·98 m., it reappears in fig. 3 together with the stone wall which was later built west of it.

Mud-brick was the normal material for walls, but sometimes no bricks were visible, and the uniform colour of the mud gave us the impression that it had been packed and hardened between boards, a method still used in Anatolia. Stone was often employed for foundations: when we reached courses of stone below the walls of room 3, at 91·85 to 91·5 m., we thought that they would soon be followed by the base of the wall, and were surprised to find that they rested on the mud-brick walls of stage two. One or more coats of whitewash usually covered interior walls and were frequently continued over the hard earth floors. Thresholds of mud-brick stood above the levels of the floors; a good door-socket has survived, by the door between 9*a* and *b*: see the photograph, pl. LXXX, 4. The inward slant of many of the walls suggested to Mr. Macartney the possibility that the roofs might have been vaulted. He tested this theory by cutting sections through several walls to see whether the bricks showed the spring of the vault, but found that this was not the case. Therefore we may assume that the roofs were flat, made of earth and branches laid on cross-beams.

Stages 4, 5, and 6 are combined in fig. 3. The lowest of these levels is represented by floors at about 92·9 m., except in room 9, the divisions south-east of 8, and the small enclosure behind 3. The latter and room 9 produced no strata which could pass as floors. South-east of 8 is what looks like a passage, with a floor at 93·35 m.; there is also the corner of a room (?) with a floor at 93·11 m. The south wall of our passage was only preserved to the height of 0·15 m., its base was at 93·3 m., and we have reason to think that the 93·11 m. floor ran beneath. Therefore the passage must have been a later addition. We may assign it to stage five, conspicuous at about 93·15–93·25 m. in rooms 3, 5, and 7, at 93·3 m. in room 8; while a sixth stage (93·45–93·52 m.) occurs in rooms 5 and 6 and in the street. Actually the word 'stage' is misleading though useful, for no doubt floors half a metre apart would be contemporary, and neighbours made their little repairs independently.

On the whole, a certain incoherence in plan seems characteristic of all the Kusura buildings. More extensive excavation would, of course, solve many minor problems; but one has the impression that to multiply the rooms available for examination would often leave the isolation of complete houses a matter for conjecture. This is partly due to the scarcity of doorways, a phenomenon that recurs at Alişar.[1] There too we find stone and mud-brick walls juxtaposed,[1] just as we do in rooms 9 and 3 on our own site.

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[1] *O.I.P.*, xix, 102.

Room 5 was, in many respects, refreshingly clear and orthodox. In its earlier days, the main doorway had been on the south, but now the need for direct communication with the street had evidently been felt, for an opening was made on the east. Over its whitened threshold, one could step into the street, where a number of large slabs, economically arranged in line, would have been a useful causeway in the muddy winter season (pl. LXXXI, 3). Originally they were completely embedded, but, by the time the photograph was taken, they had been cleaned for planning and a section had been cut

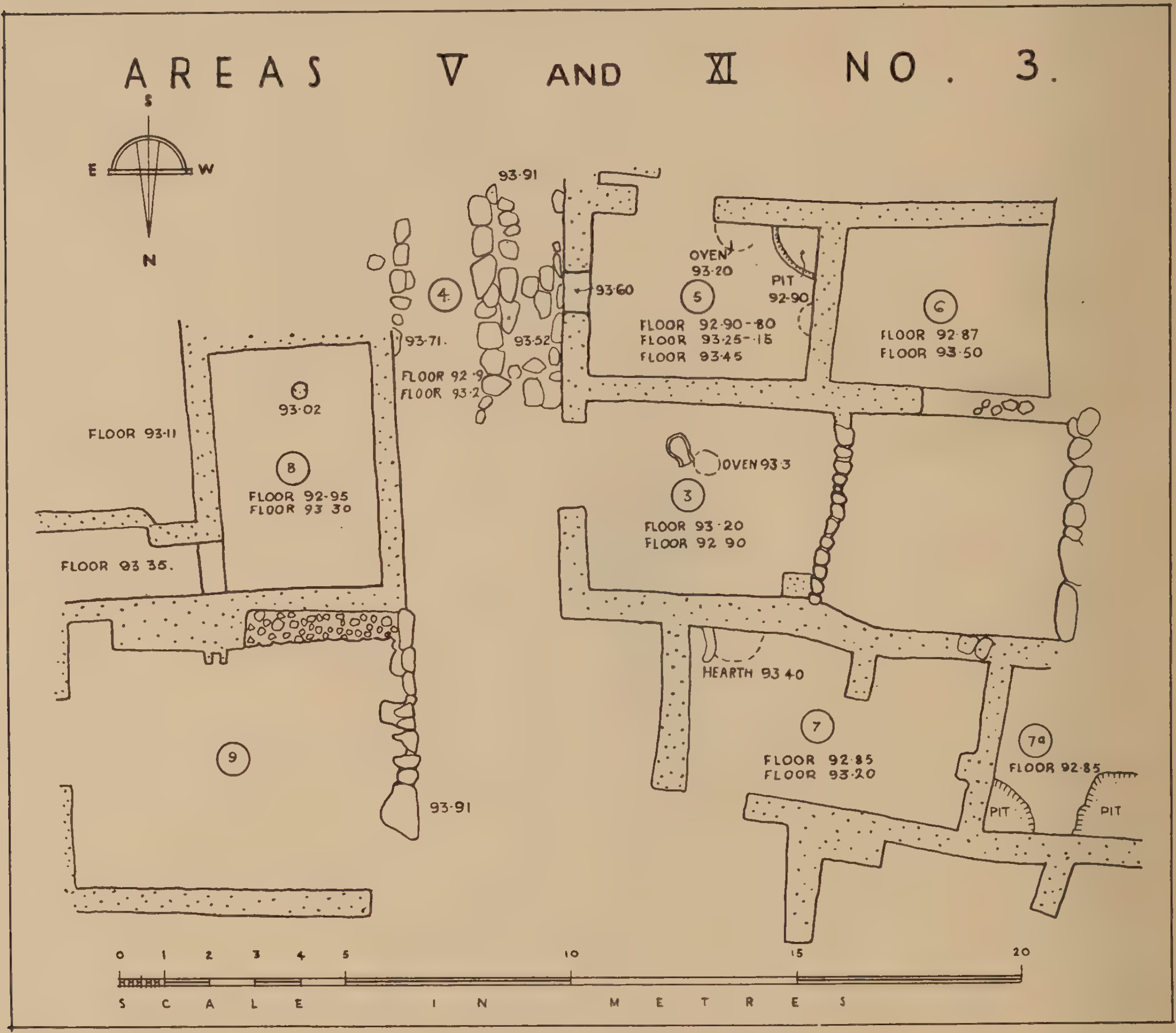
AREAS V AND XI NO. 3.
S
E
W
N
93·91
OVEN 93·20
PIT 92·90
93·60
4
5
FLOOR 92·90-·80
FLOOR 93·25-·15
FLOOR 93·45
6
FLOOR 92·87
FLOOR 93·50
93·71
93·52
FLOOR 92·9
FLOOR 93·2
93·02
FLOOR 93·11
8
FLOOR 92·95
FLOOR 93 30
FLOOR 93 35.
OVEN 93·3
3
FLOOR 93·20
FLOOR 92 90
HEARTH 93 40
9
93·91
7
FLOOR 92·85
FLOOR 93·20
7a
FLOOR 92·85
PIT
PIT
0 1 2 3 4 5 10 15 20
SCALE IN METRES

Fig. 3. Areas V and XI, period B, stages 4–6

into the northern part of the street. When removing the debris of mud-brick that filled the doorway, we found part of a jar just above the threshold.

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[1] *Op. cit.*, 36.

Inside room 5 at 92·9 m. was a pit, more like the conventional *bothros* than the shallow depressions described on p. 222. It was 0·35 m. deep in the corner, though only 0·05 m. deep near the edges, and lined with yellow clay 0·07 m. thick. At 93·2 m. was an oven, its terracotta dome running back into the wall, its sides curving inwards to form the oven-floor, which rested on irregularly laid potsherds. Behind the dome was a hole like a flue, but we could trace no outlet: east of the structure, a thick patch of whitewash lay across the aperture in the south wall, which may have been no longer a doorway but the entrance to premises used for cooking. A curved shelf covered with whitewash projected from the west wall, and is shown in fig. 3 by a dotted line. Above this shelf, the white coating of the walls, which elsewhere descended as far as the 93·15 m. floor, was absent. The theory that a doorway with a semicircular threshold had once existed there, and had been blocked up, was rejected, for all other thresholds were flush with the walls. It resembled most closely a platform in room 7 discussed below (pl. LXXX, 3).

Room 3, with its hearth and pithos-oven at 93·3 m., has been described in *Archaeologia*, lxxxvi, 10, except for the small, square platform in the north-west corner. This platform was of hard mud with whitewash on the sides: it was only preserved to a height of 0·05 m., but must formerly have been higher, for the edges of the whitewash marked its upward course on the walls.

Room 6 had a doorway on the north, possibly also on the south; but there the evidence was so ambiguous that we hesitated to draw a definite opening on the plan. Like room 5, it was very productive of pottery above the highest floor. The whitewash on the walls went down no farther than 93·25 m., as though a floor had existed there; but the earth at that level, though yellow and sterile, was extremely soft. The space west of room 3, with irregular walls, no floors, and a fill of heavily burnt matter, may have been uninhabited.

Room 7 opened on to the court. The south, west, and north walls were whitewashed, possibly also the eastern one; so too were all faces of the 'buttress' on the south wall as far as the 93·2 m. floor, though the 'buttress' itself ended with the 92·85 m. floor. To this layer belonged a platform at about 93 m. against the west wall, of burnt terracotta with whitewashed sides and stones embedded beneath it.[1] In the face of the wall above was a niche (pl. LXXX, 3). Whether niche and platform were religious or secular we cannot say, but in either case they must have been used for the same purpose as the curved shelf in room 5.[2] A later hearth, at 93·4 m., was built just above the earlier cross wall illustrated in fig. 2. West of room 7 was 7 *a*, incompletely excavated, containing two pits only 0·08 m. deep.

An exceptional number of vases was recovered from room 8, where most of them lay, not directly on the 92·95 m. floor, but in the earth just above it. Near the south wall was a cylindrical object of mud-brick, like the drum of a pillar (top at 93·02 m.). It was of hardened mud with a remarkably solid core, and a black, ashy stain formed a ring round the centre. Compare the cylinder from Alişar I (*O.I.P.*, xix, 36), very like ours except that it had a central depression which was 'somewhat blackened, but not enough to suggest . . . a fireplace'. The excavators of Alişar incline to the belief that this object was an altar: ours, I think, was the base of a small column like the rectangular one found in the shrine in 1936, in which case the vases, the idol (p. 251) and the seal (p. 268) would have been votive. The interest of the room ceased with the 93·3 m. floor, above which nothing noteworthy was recorded.

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[1] Shown in fig. 3 as an excrescence of the wall.

[2] It is, however, significant that a fragmentary idol was found in room 7 at 93·2 m.: see p. 268.

The final phases of period B in areas V and XI are shown in fig. 4, together with some remains belonging to the transitional period (p. 229). Is it possible that the group of more or less mud-brick houses on the west was contemporary with rooms 1 and 2, differently orientated and founded consistently on stone, in the east? I do not see how it can have been otherwise, for two reasons: floors at about 94 m. occurred all over areas V and XI; neither the sections drawn in 1936 nor our observations of the strata during 1936 and 1937 gave cause to assume an abrupt change of level between 1 and 2 on the one hand, 3, 5, 6, and 7 on the other.

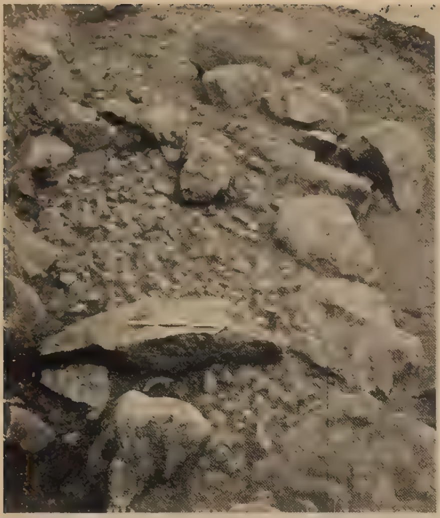
Room 5 contained only one feature of interest, a terracotta basin 0·10 m. deep at 94·01 m. in the opening by the old oven. This raises a doubt as to whether there really was a door there, or whether the break in the walls was the result of a pit having been dug from a higher level. The existence of a pit seems to me improbable: no alien earth was observed above the basin, the edges of which ran smoothly into the contemporary floor.

A magnificent jar, fig. 12, lay on its side in room 6, partly above, partly below the hard yellow stratum at 93·9 m. which must represent a floor like the one in room 5. A store-jar should stand upright, however far its base is sunk below a floor-level: a jar on its side suggests a burial, but there was no burial here. One specimen, placed so unexpectedly, requires explanation; but there was not sufficient evidence to enable us to judge whether it had always lain more or less horizontally, or whether some one, trying to dig it out in antiquity, had overturned and abandoned it.

The east wall of 3 no longer survived, and the stone wall on the west was crooked and irregular. During the transitional period, when it had fallen into ruin, a hard clay basin lined with whitewash (94·4–94·12 m. in fig. 4) was dug out above it.

This group of buildings—5, 6, and 3—is a striking instance of the conservatism, dictated no doubt by economy, that obtained on this part of the site. From the lowest excavated strata till the end of period B, the main walls of the houses, heightened by the addition of fresh rows of bricks, showed no fundamental change of plan: even the internal arrangements of the rooms were modified as little as possible.

The first innovation in area V was the disuse of room 7. Its former east wall was covered by a floor at 93·98–94 m. on which a stone wall was built. Only a short stretch of this wall was standing at the time of excavation, but if prolonged and combined with the north wall of room 3 and the west wall of room 2, it would have formed an enclosure for the objects described on p. 10 of *Archaeologia*, lxxxvi: the kidney-shaped platform at 94·3 m. and the pithos which sloped from 94·4 m. down to the deposit of sherds at 93·89 m. A photograph of the skeleton inside, not published last year, is reproduced on pl. LXXX, 2.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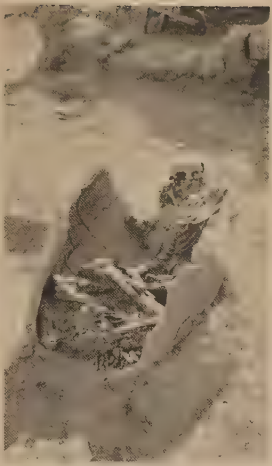
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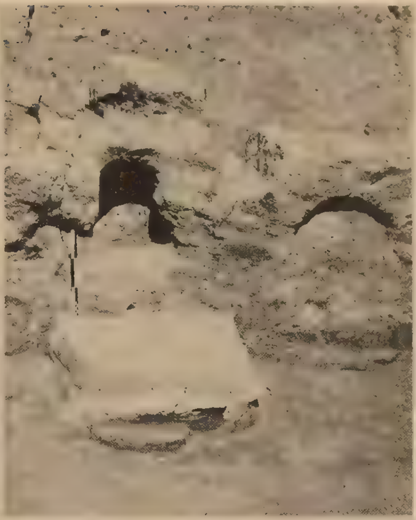
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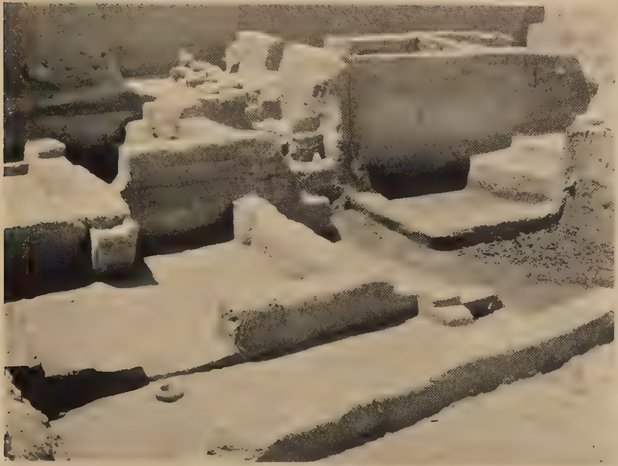
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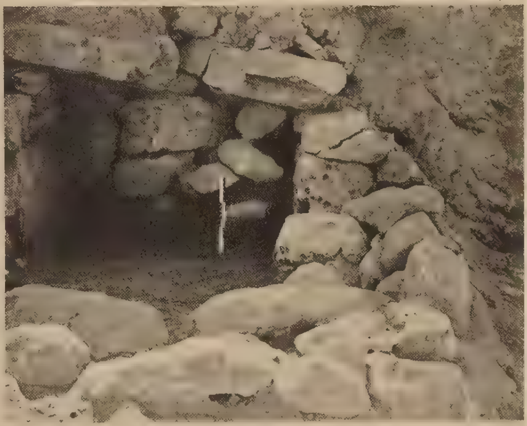
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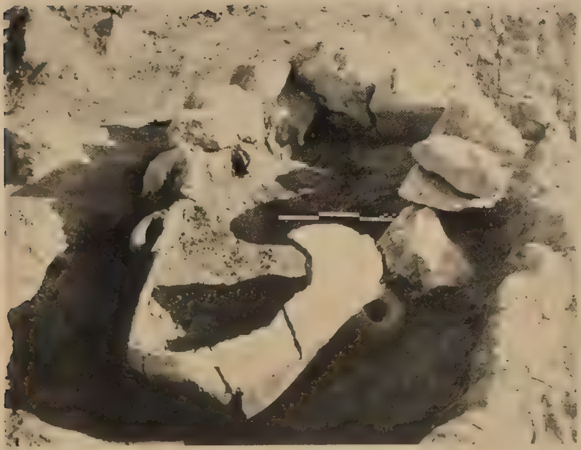
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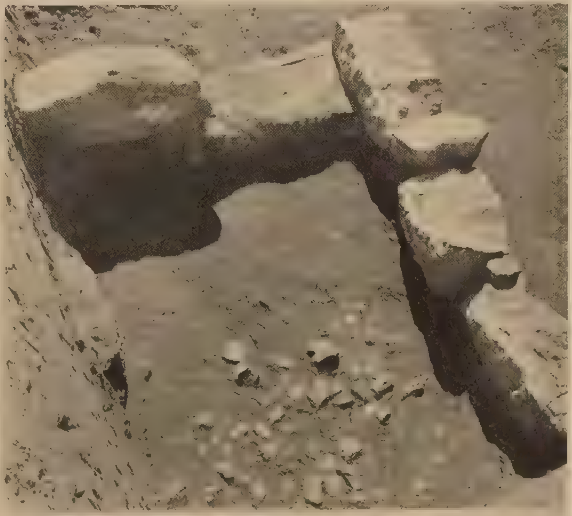
7

1. Cobbled roadway in pit XII (p. 228). 2. Pithos-burial in area V (p. 226). 3. Platform and niche in room 7 (p. 225). 4. Areas V and XI looking south-west, rooms 9*b* and 9*a* in foreground (p. 223). 5. Grave in area XI (p. 229). 6. Pithos-grave in area XI (p. 228). 7. The lowest floor-level in area V (p. 220).

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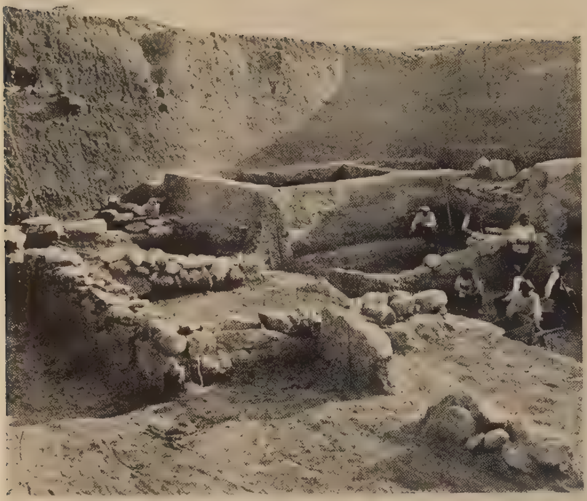

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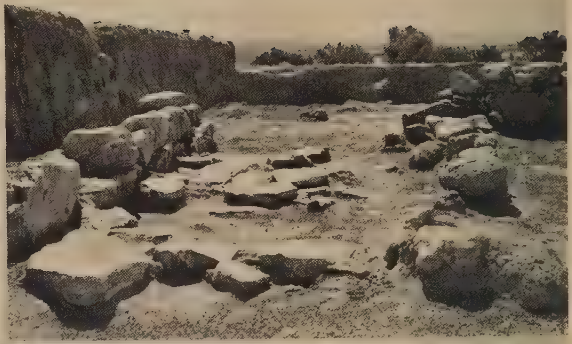

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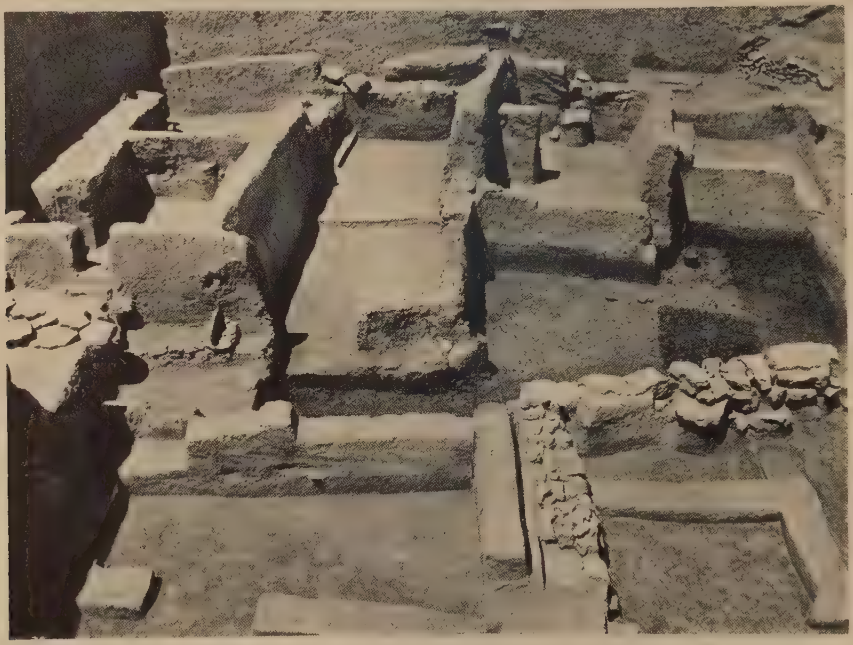

3

1. Areas V and XI, room 2 in foreground (p. 227). 2. Walls and paving in area I (p. 230). 3. Areas V and XI, rooms 8 and 9 in foreground, street on left. The central space, excavated in 1936, is at a low level.

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A still more complete break with former architectural traditions occurred when rooms 1 and 2 were built without reference to or use of any earlier walls (pl. LXXXI, 1, foreground). Rooms 8 and 9 just below had not, apparently, been destroyed by fire or by an earthquake; nor, as explained above, is there any convincing proof that 1 and 2 were later than other buildings at the same level. It would seem that one family had decided to build a completely new house.

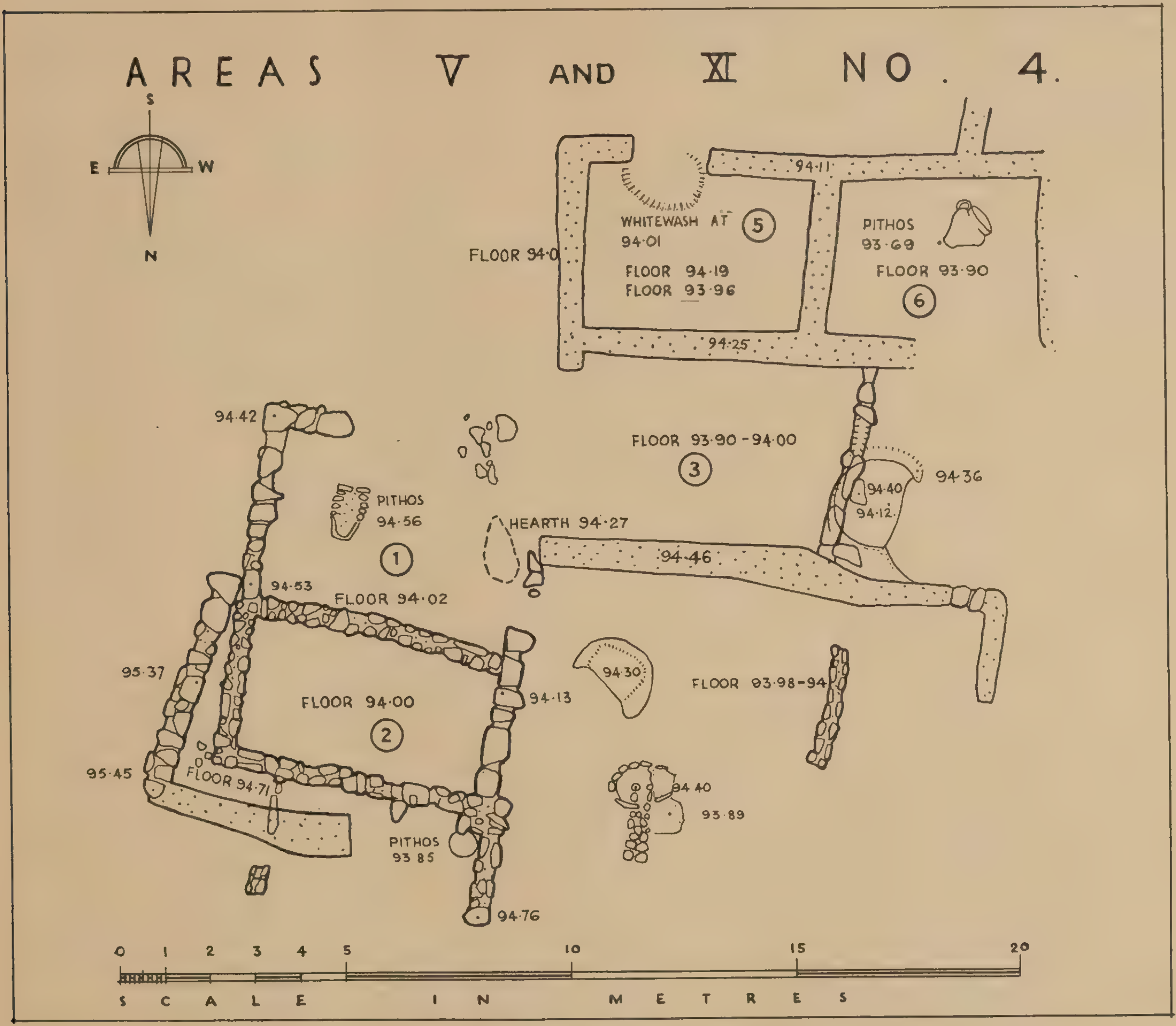
AREAS V AND XI NO. 4.
S
E
W
N
94·11
WHITEWASH AT 94·01
⑤
FLOOR 94·0
FLOOR 94·19
FLOOR 93·96
PITHOS 93·69
FLOOR 93·90
⑥
94·25
94·42
FLOOR 93·90 - 94·00
③
94·36
94·40
94·12
PITHOS 94·56
HEARTH 94·27
94·46
①
94·53
FLOOR 94·02
95·37
94·30
FLOOR 93·98-94
FLOOR 94·00
②
94·13
95·45
FLOOR 94·71
94 40
93·89
PITHOS 93 85
94·76
0 1 2 3 4 5 10 15 20
SCALE IN METRES

Fig. 4. Areas V and XI, period B, final stage, and remains belonging to the transitional period

Examining the pottery from 1 and 2 and from the space south-east of them, I found that fragments of transitional vases (see p. 237, below) appeared here and there among the B wares; also that a peculiar type of bowl (fig. 14, no. 16), hand-made, with high handle and very hard red slip, was especially common. Now Mr. Stewart had already in

1936 observed the rare occurrence of transitional ware in area V between 94 and 94·25 m.; evidently it was coming into use, a novelty at Kusura; but in rooms 1 and 2 the percentage, though still small, seemed to be a little higher than in the places dug by Mr. Stewart. I did not notice any of the peculiar bowls in the other rooms.

The difference, slight but significant, between the pottery from 1 and 2 and from the other houses might be used as an argument in favour of the priority of the latter, but in view of the facts summarized above, I am inclined to think that it mirrors the taste of more progressive inhabitants. In any case, the construction of the house antedated a catastrophe—fire, earthquake, or invasion—which destroyed part of Kusura during the period transitional between B and C.

Before describing the higher levels of V and XI, a word must be said about pit XII. Its excavation gave little evidence concerning the growth of the town during period B, and even the potsherds were disappointing. From time to time we would strike a deposit where they were so corroded that, unless their forms were distinctive, they were not easy to date. The only structure worth mentioning was a road or pathway, between 94·4 and 94·8 m., nicely paved with cobbles and bordered with larger stones (pl. LXXX, 1). *Thermi*, pl. 1, 3, depicts a similar though wider street from the third settlement.

The Transitional Period

Just above the 94·02 m. floor in room 1 was a pithos-grave, the top of the pithos being at 94·56 m. The vessel's mouth was closed by two stones, and other stones were neatly disposed at either side of the neck (pl. LXXX, 6; see also fig. 10, no. 5). Inside was the skeleton of a child extended on its back with the head to the north-east: a miniature jug, fig. 11, no. 5, had been placed as a grave-offering beside the legs.

The practice of burying infants and even adults beneath the floors of houses was widespread in prehistoric Anatolia: here, however, we were disconcerted by being unable to identify any floor above the pithos with which it could be associated. A stratum of burnt earth, on which was superposed the dusty yellow substance of decomposed mud-bricks, covered the grave, the walls of 1 and 2, and all the surrounding space in area XI, while the earth in area V was full of yellow matter, black ash, and burnt patches. The sections (pl. LXXIX), on the whole rather uninforming, illustrate disturbance and disintegration.

Area V had in 1936 yielded some scattered human bones and a skull, embedded in the black and yellow earth which was spread over room 3: that their presence was due to the catastrophe mentioned above may be gathered from a group, excavated by Mr. Stewart during the same season, of human remains, the publication of which I deferred till further evidence concerning the stratification had been obtained.[1] They were uncovered in the street (4), among fallen stones, streaks of ash, and bits of burnt brick (fig. 5). One individual lay on its back, with the knees drawn up and the head turned to the left: the skull of another appeared a little higher up, at 94·84 m., lying on its right side so that only the base of the skull was visible when the drawing was made. The lower jaw had been detached and was found not far away, together with broken bones some of which were from the leg. It is reasonable to suppose that three people or more had met with violent deaths in this part of the town; that a conflagration had overwhelmed the houses beside and beyond the street; but what agency threw the isolated skulls and bones among the debris, we can only guess.

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[1] The human remains have been submitted to Dr. Şevket Aziz Kansu, who has kindly undertaken to examine them.

All these things, combined with the ruinous nature of the few walls found above 94·6 m., go far to prove that some disaster ushered in the transitional period in areas V and XI: so too in area I, where an enormous mud-brick wall had been baked red by fire (*Archaeologia*, lxxxvi, 11). It is tempting to attribute the disaster to the people who introduced the culture of period C, or even to the makers of the transitional ware.

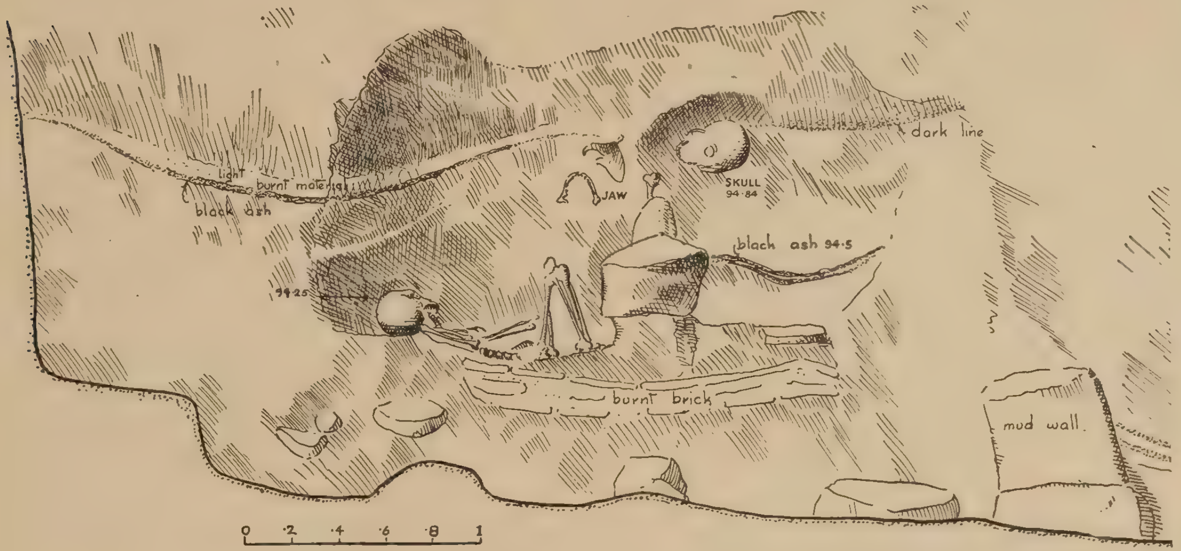

Fig. 5. Human remains in area V. Transitional period

During this troubled interlude, a type of grave not otherwise found at Kusura was constructed in the extreme north-east corner of area XI (pl. LXXX, 5, see also the section on pl. LXXIX). The grave consisted of a small enclosure of stones, with an opening on the west: the eastern part of the enclosure, at about 0·80 m. above the base, was roofed with larger stones, but above the western part the earth had been disturbed. Inside were the bones of at least three individuals, so fragmentary that little could be learned from them except that they seemed to have been in that condition when buried: perhaps they had been victims of the calamity, whose bones had been tidied away into a communal grave.

The only walls worthy of publication built during this period were the ones in XI outside the north-east corner of room 2. They rested on a white deposit at 94·71 m. which looked like a floor except that it covered some of the space outside as well as inside. Evidently they were once part of a house orientated like 1 and 2, and occupying much the same area. Patches of a floor at 94·36 m. were observed beside the basin west of room 3.

Transitional pottery was well distributed in V and XI throughout the levels between 94·5 m. and about 96 m., while B wares were gradually replaced by C wares. In pit XII, period B ends at more or less 95·5 m., indicating that there was as yet no appreciable rise in the strata towards the centre of the mound. It was during the transitional period itself that a quantity of earth accumulated there: this earth contained B wares accompanied by transitional and coarse indefinite sherds up to *c.* 98 m., after which we found transitional, indefinite, and C wares, the transitional element disappearing above 100 m. The absence of architectural remains in XII makes more exact definition of the periods impossible.

Period C

In 1936, a complex of buildings was excavated on the summit of the mound, and some evidence obtained concerning the domestic architecture and the religious observances of the population during period C.[1] On the slope of the mound, a little west of the summit, parallel walls had appeared in area I, but, as pointed out in my introductory paragraphs, all test pits and areas were disconnected. The means taken to unite them are described below, and the consequent discovery of the massive structures which we believe to be a fortification and gateway: the importance of these walls was obvious, and their investigation, superintended by Miss Clay, employed a team of workmen throughout the season. Her report, published herewith, adds an earlier chapter to our records of period C.

I need only supplement it by a brief account of the upper strata of areas XI and V, and a note on the walls in I which seem to be contemporary with the fortifications (p. 232). These walls ran in the same direction as, or at right angles to, the fortification walls and were ill-preserved: there was also a pavement of large slabs at 98·38 m., which can be seen on pl. LXXXI, 2, and on the plan, pl. LXXVIII, between the walls marked 98·79 and 98·57 m. Many more slabs were visible in 1936, but unluckily one of the villagers removed the best of them before the map was made. Areas V and XI produced nothing of interest: a few pieces of masonry suggest that here were houses differently orientated to the remains in I. In various parts of areas X, I, XI, and V, we encountered shallow pits filled with a white substance, probably the work of masons mixing whitewash. Some of these pits, together with shapeless patches of whitewash or 'plaster' and the white coating of walls and floors, are marked in the sections on pl. LXXIX. Since area II and pit IX had, during our second season, yielded walls belonging to the C deposits, there is reason to believe that the lower slopes of the mound were inhabited at this period; but whatever existed there must, to judge from its condition, have been vulnerable in antiquity and accessible to destructive influences ever since.

Areas X, III, and VIII: The Fortification System

By RACHEL CLAY (R. MAXWELL-HYSLOP)

At the end of the 1936 season it was obviously necessary to relate the buildings excavated in areas III, VI, VII, and VIII on the top of the mound to the group of walls in area I lower down the slope. With this end in view, in 1937 a trench 6 m. wide was dug which at once created fresh problems and involved further excavation (fig. 6). Two roughly parallel walls, 3·5–2·5 m. apart (A and B on fig. 6), which apparently must have formed part of a fortification system, were found running across the trench (pl. LXXXII, 1).

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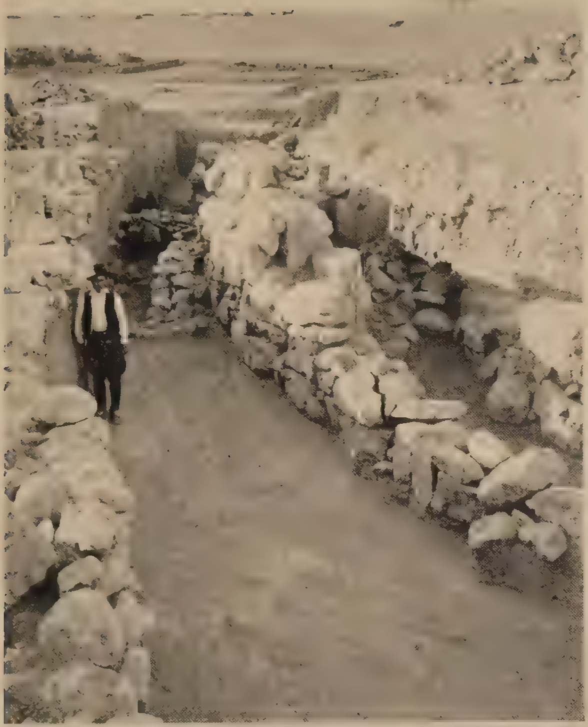
[1] *Archaeologia*, lxxxvi, 11 ff.



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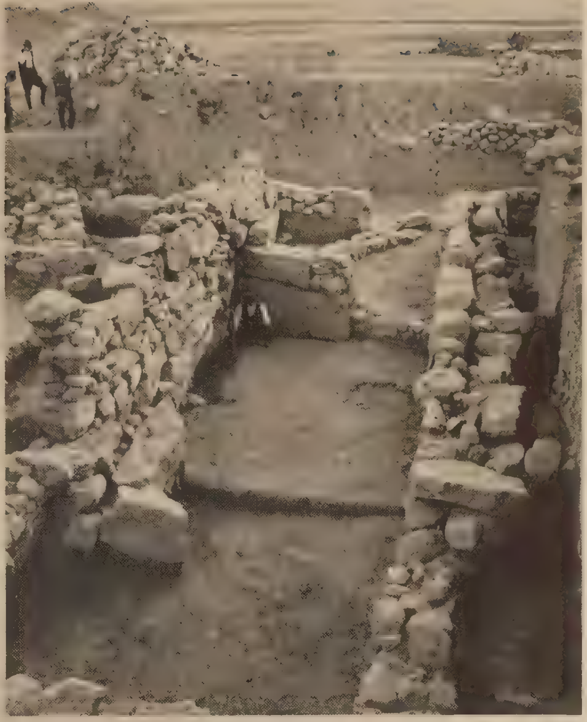

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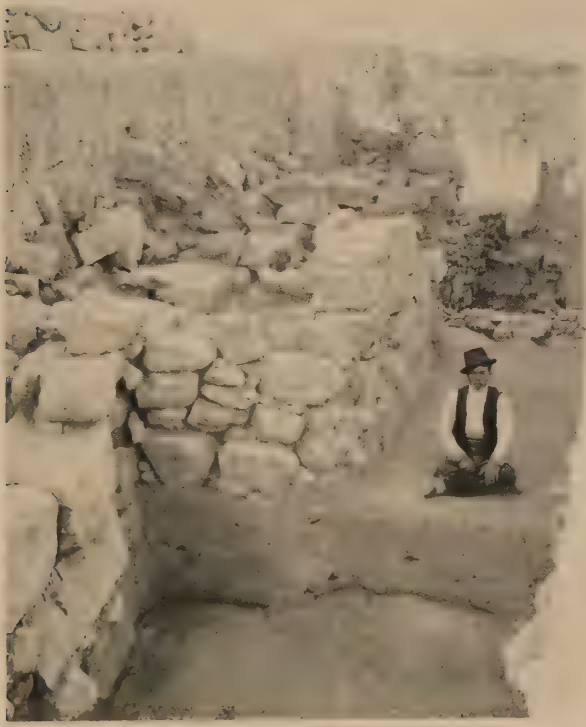

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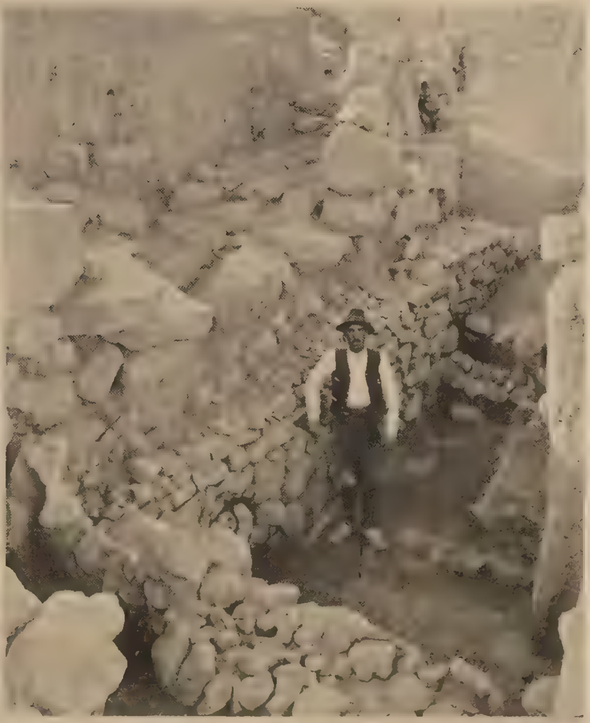

4

1. The fortifications. Wall B on left, walls A and A1 on right, looking north. 2. The gateway, looking south-west. 3. The buttress by the fortification wall. 4. Walls A, P and Q.

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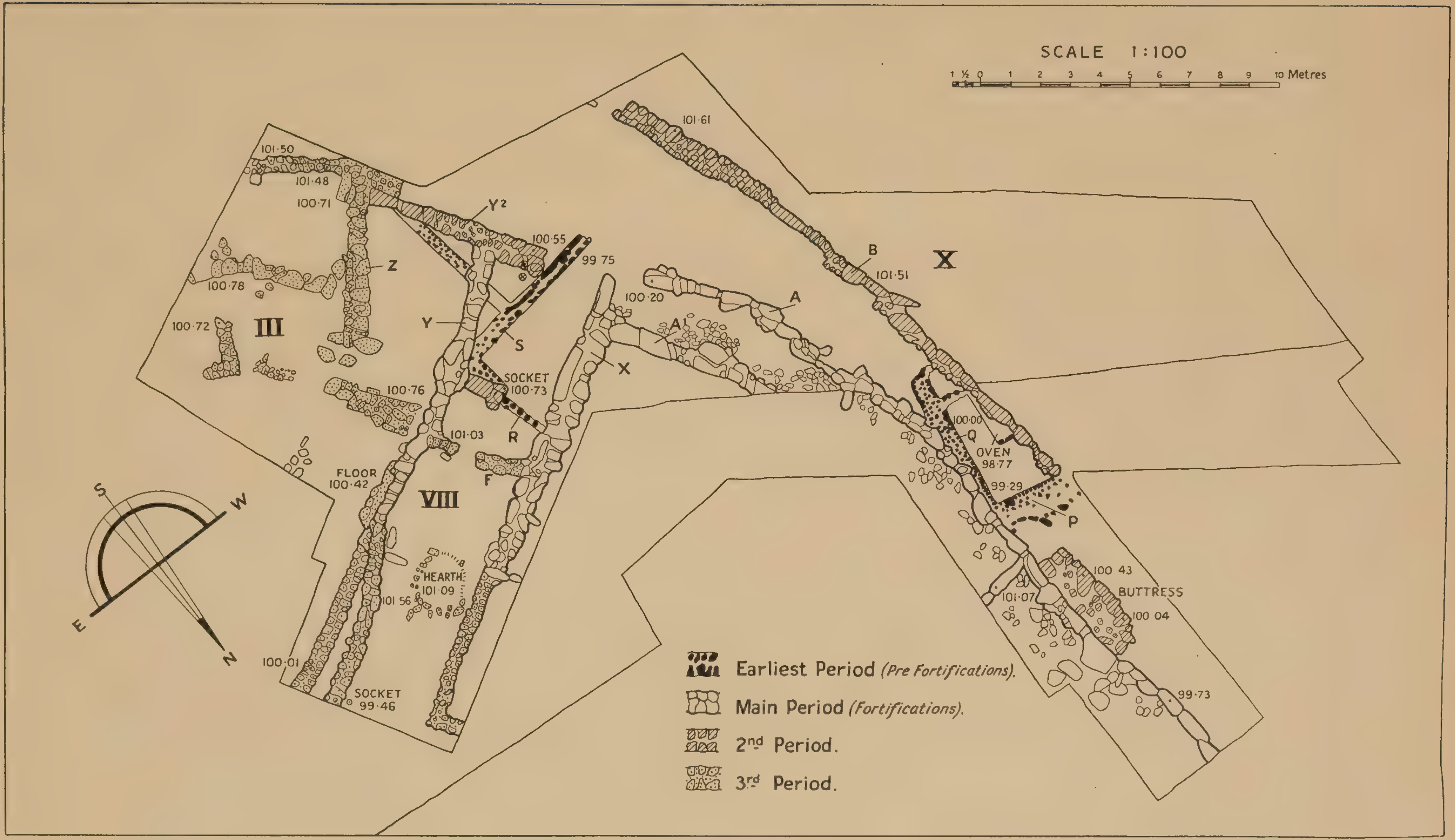
SCALE 1:100
1 ½ 0 1 2 3 4 5 6 7 8 9 10 Metres
101·61
B
101·51
X
101·50
101·48
100·71
Y²
100·55
99 75
Z
100·78
100·20
A
A¹
100·72
III
Y
S
X
SOCKET
100·73
100·76
R
101·03
100·00
Q
OVEN
98·77
99·29
P
FLOOR
100·42
F
VIII
S
W
E
N
HEARTH
101·09
101 56
100·01
SOCKET
99·46
100 43
BUTTRESS
100 04
101·07
99·73
Earliest Period (Pre Fortifications).
Main Period (Fortifications).
2nd Period.
3rd Period.

Fig. 6. Plan of the fortification system. Period C

The outer wall (B) was a later addition, although it was in all probability in use at the same time as the inner wall. The top courses of both these walls had, for the most part, either disappeared or collapsed.

Construction of Walls A–B. In its best-preserved portion, the inner wall A stood over 2 m. high and was composed of three courses of long oblong limestone blocks (average dimensions 1 by 0·36 m.), packed with small, rough stones. Parts of it seemed to have been double, with the space between, 1·5 m. wide, filled with rubble and smaller blocks (fig. 6, A, A 1). Wall A was traced practically to the edge of the north side of the mound, which had been badly cut into by the villagers in order to obtain mud-brick. At one point it had been strengthened by a rectangular buttress (pl. LXXXII, 3), constructed of large blocks packed with smaller stones. Only three courses remained and it must have been a later addition, being built up to the line of wall A but not bonded into it.

The outer wall, B, a less careful piece of work, was made of large blocks extended on edge or turned upright, with smaller stones between. It petered out at its north-east end, where it was only built of small, rough blocks.

From stratigraphical evidence it was ascertained that both the walls were certainly earlier than the buildings in areas III, VI, VII, and VIII, but were probably contemporary with the walls in area I; their function, presumably, was to defend the centre of the town, in other words, the citadel,[1] at a period before the buildings cleared in III, VI–VIII were erected.

The Entrance. The remains of an entrance into the citadel (pl. LXXXII, 2) were discovered in area X, and followed up in area VIII. Two parallel walls (X and Y on fig. 6), over 3 m. apart, flanked an inner and outer gateway. From the position of the door-sockets,[2] it was evident that the actual gateways had been purposely narrowed to a width of 1·5 and 2 m. respectively at a later period. Several different building periods can be distinguished in the history of the fortifications, all of which fall within period C. They may be briefly summarized as follows: To the first and main period can be attributed the walls A, A 1, and the entrance. The second period was marked by a heavily burnt level within the entrance. Parts of the huge stone blocks forming the foundations of the two flanking walls had been so severely burnt that the face of the stone began to flake away as soon as they were uncovered. It appeared that after this catastrophe a large part of wall Y, which had collapsed in the conflagration, was rebuilt, and the gateways were then narrowed.[3] Later, in the third period, when the gateway had fallen into disrepair, the top courses of wall Y may again have been used to form part of the wall of a new building (F on fig. 6). To this period belonged the east end (stippled on plan) of walls X and Y[4] and a big circular oven (diameter 2 m.) inside the gateway, constructed in the usual manner with a hard floor of potsherds and stones. No traces of the roof remained. Above these were the buildings of the latest town, discussed in last year's report.

Area III, South of the Entrance. The inner wall A did not continue on the south

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[1] For remains of walls outside the fortified area, see p. 230.

[2] Two sockets, one above the other, at 100·67 and 100·86 m. have been marked ⊗ on fig. 6.

[3] Wall B and the buttress have been marked on fig. 6 as belonging to this period because they were later than A and earlier than the third stage: see above.

[4] The stretch of masonry marked 101·56, parallel with the east end of wall Y, is merely the top courses of the wall slipped forward.

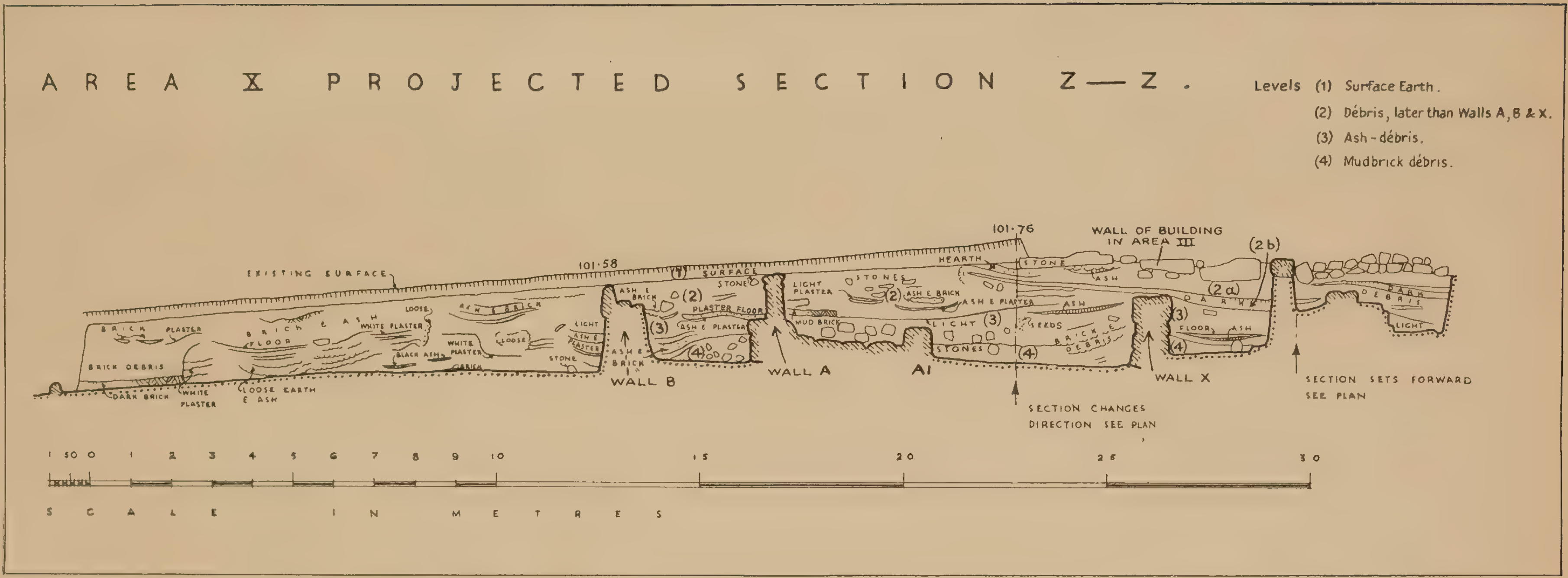
AREA X PROJECTED SECTION Z—Z.
Levels (1) Surface Earth.
(2) Débris, later than Walls A, B & X.
(3) Ash-débris.
(4) Mudbrick débris.
EXISTING SURFACE
101·58
101·76
WALL OF BUILDING IN AREA III
(2 b)
(2 a)
HEARTH
STONE
ASH
DARK
DEBRIS
LIGHT
SURFACE
STONE
(1)
(2)
(3)
(4)
ASH & BRICK
PLASTER FLOOR
ASH & PLASTER
LIGHT PLASTER
STONES
MUD BRICK
ASH & BRICK
ASH & PLASTER
LIGHT
SEEDS
BRICK & DEBRIS
FLOOR
BRICK PLASTER
BRICK & ASH
WHITE PLASTER
FLOOR
LOOSE
ASH & BRICK
WHITE PLASTER
BLACK ASH
LOOSE
LIGHT
ASH & PLASTER
STONE
ASH & BRICK
BRICK DEBRIS
DARK BRICK
WHITE PLASTER
LOOSE EARTH & ASH
BRICK
WALL B
WALL A
AI
WALL X
SECTION CHANGES DIRECTION SEE PLAN
SECTION SETS FORWARD SEE PLAN
1 50 0 1 2 3 4 5 6 7 8 9 10 15 20 25 30
SCALE IN METRES

Fig. 7. Section of fortification walls and adjacent deposits. Period C

side of the gateway. Here its place was taken by a less imposing wall (Y 2 on fig. 6), which was built later than the entrance flanking wall (Y on fig. 6), thus narrowing the gateway, possibly for purposes of defence. Wall Y 2 extended only 4 m. to the south-east from the gateway, and at that point was overlaid by a later wall (Z on fig. 6). Only ruinous walls, none of which formed any distinct plan,[1] were found in area III, but from the stratigraphical evidence it was inferred that at some period after the gateway fortifications had ceased to be used, this area was filled in and levelled.

The Early Walls. A period which antedated the fortifications was identified at two points. Earlier walls (R, S on fig. 6) were found below the actual entrance, and one stretch of the fortification wall A was built directly above the corner of an earlier building (P and Q on fig. 6; pl. LXXXII, 4). Walls P and Q were remarkable for their careful masonry. Wall Q was constructed of three courses of stone blocks (average dimensions 0·5 by 0·3 m.), above which were flat blocks and smaller stones. Wall P was built of small stones laid on an earth foundation and faced with large flat rectangular blocks. It may conceivably have served as a terrace when the buttress was built, for its back was roughly finished. The fragmentary skeletons of five infants were found buried in the small excavated area enclosed by walls P and Q. Of these skeletons, four were unearthed in the corner, at levels 99·5, 99·0, 98·75 and 98·6 m., while the fifth lay directly against wall P, at 99·75 m. The skull of no. 3 was squashed under a large block which appeared to have been intentionally placed directly over it. A detailed report of these skeletons will be published later (see p. 228, note 1).

Date of the Fortification System and Analogies with Other Sites. Although it was evident that the defensive walls and the entrance were earlier than the buildings in areas III, VI–VIII dated in the latter part of period C, it may be regarded as unlikely, owing to the nature of the pottery evidence (see p. 239), that these two phases were separated by a long interval of time. There was clearly little difference between the pottery of the main fortification period and the buildings of period C excavated in 1936. Therefore we may safely assign the walls and entrance to period C, between 2000 and 1000 B.C. Pottery of the slightly different coarser type discussed on pp. 237–9 occurred only in levels contemporary with the earliest walls.

There are several examples of fortifications belonging to, or not far removed from, the age of the Hittite empires, which afford parallels to the defensive system at Kusura. Methods of construction were at that time fairly uniform over the entire Hittite area, and minor differences were, no doubt, due to varying local conditions. The principle of the double defensive wall filled with stones, rubble, or earth, occurs at Bogazköy,[2] Alişar,[3] Carchemish,[4] etc., and is also known in the Aegean.[5] On the citadel of Alişar III ('Early Bronze Age') which Bittel equates with the early Hittite empire, the first wall is described as follows: 'the inner and outer faces . . . were carefully set, the space between being filled with small stones'. The second wall 'consists of stones up to 0·50 wide which are carefully set on the outer and inner faces, whereas the interior is filled in carelessly'.[1] At Bogazköy, both citadel and town walls were strengthened at intervals by rectangular buttresses similar in plan to the Kusura buttress.[2] The materials employed at the Hittite capital and at Alişar were mud-bricks on stone foundations, and at Kusura, although the superstructure had entirely disappeared, traces of mud-brick provided a clue to the nature of its composition. The Kusura gateway, though showing points of similarity with the monumental King's Gateway at Bogazköy and the northern city gate at Alişar, may more profitably be compared with the western one in town V at Thermi. There, the western entrance consisted of a straight approach between two parallel walls, and the southern entrance was laid out on a similar plan.[3]

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[1] These walls, the east end of wall X and the lower part of the east end of wall Y, are marked as period 3 on fig. 6. It is possible that they belonged to a period intermediate between periods 2 and 3, but to avoid confusion this has not been indicated.

[2] Bittel, *Die Ruinen von Bogazköy*, 13, 25; Puchstein, *Boghasköi, Die Bauwerke*, 42 ff. Here the space between the walls was strengthened by cross walls forming interior compartments.

[3] *O.I.P.*, xxviii, 214; xxix, 4, 290–2.

[4] Woolley, *Report on the Excavations at Jerablus on behalf of the British Museum*, Part II: *The Town Defences*, 46.

[5] *Excavations at Phylakopi in Melos*, 31 (*Hellenic Society, Supplementary Papers*, No. 4).

It is possible that in the Kusura fortification system, built on a singularly simple scale, we have an example of the normal provincial method of protecting the citadel whose inhabitants neither possessed the leisure nor enjoyed the prosperity necessary for the erection of circuit walls in the manner of Bogazköy, Alişar, and other important cities. It would have been tempting to associate the Kusura defences with the exploits of Madduwatta, who organized a revolt in the Afyon district and broke away from the power of the Hatti under Tudhalija IV and Arnuwanda II (p. 273), had there been any justification for giving so late a date to the walls and gateway described in this section.

POTTERY

By W. LAMB, *M.A.*, *F.S.A.*

The quantity of vases and sherds acquired in 1937 enables us, without modifying the conclusions drawn in 1936, to trace the development of certain types within period B, to study in some detail the 'transitional ware', made in the late B and very early C periods, and to estimate more accurately than before the connexions between our Kusura pots and those from other sites.

Development and distribution will be described first; they will, I fear, interest only those who specialize in Anatolian pottery, or who seek to find parallels for their own finds; without doubt, they will prove less useful than the general discussion of forms and fabrics on pp. 14 ff. of *Archaeologia*, lxxxvi. To the B fabrics listed there, add a plain buff ware of which there are very few examples, the brown paint or slip of pl. LXXXIII, 8, an unfortunate experiment, and the unusual red-buff of pl. LXXXIV, 1.

Period B. The evidence, though checked from other sources, was drawn chiefly from areas V and XI: any levels quoted in this section refer to that part of the excavation unless otherwise stated. I have already explained that pit XII was unreliable owing to the corrosive quality of the soil there.

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[1] *O.I.P.*, xxix, 290-2.

[2] Bittel, *op. cit.*, 13, 14, 25-7, 30, 32; Puchstein, *op. cit.*, 39 ff. Compare also *Excavations at Phylakopi*, 30, fig. 15; 33.

[3] *Thermi*, 44-7.

The only wares which were not common to all stages of B were the buff with grey or red slip, and the plain buff, which were not observed in the lower strata. A peculiar type of decoration, consisting of reserved bands or patterns produced by scraping away or omitting a red slip and exposing a red or buff clay (pl. LXXXIII, 11; pl. LXXXIV, 12, lower part; *Archaeologia*, lxxxvi, pl. VI, 13 *a*) seemed confined to the layers between 92 and 94 m.: one isolated sherd had strayed into the C deposits. Other forms of ornament, including the rarely used incision, appeared at all stages, the one exception being the horizontal ribs of the 'Kusura bowls' (pl. LXXXIII, 6, 7). These were absent below 90 m., very scarce below 92·25 m., a little less so from 92·25 to 93 m., but from 93 to 94 m. they were abundant, and lasted till the close of the period. Red bowls with rims like that in pl. LXXXIII, 8, were very frequent in the low levels of B. Bowls with horizontal handles, plain or twisted, began, as far as we know, above 90 m. Bowls with tubular lugs like those from Thermi occurred between 89·75 and 93·5 m. (fig. 9, no. 7); ears, double and perhaps single, between 90·75 and 94 m. (fig. 9, no. 5);[1] squat jugs with wide mouths (pl. LXXXIV, 3) between 89·75 m. and 94 m., though a few may have survived into the last of the B strata. Other shapes are less informing because less well represented; but it is interesting to note that beaked jugs (with spouts like pl. LXXXIII, 2), though never fashionable, were never wholly lacking. Part of a red-cross bowl, resembling the transitional ones, except that it has a typical B slip and a rim like fig. 8, no. 6, was found in XI at 93–92·75 m.

Concerning the western and south-western affinities of the B wares, little need be added to what was said in my last year's report. The new vases strengthen our impression that Kusura was for a long time under western influence: compare the jug, pl. LXXXIII, 2, with tripod jugs from Yortan and Thermi,[2] and its semi-human feet with specimens from the same two sites.[3] The unique black spout, fig. 14, no. 15, is a more flamboyant version of B.M. A 11 and 21[4] or *S.S.* 1316; and we are now rich in tubular lugs, bowls with ears, and other forms which had been welcomed as novelties in 1936.

The culture of central and eastern Anatolia during the major part of the third millennium is best known from Aliṣar I. Most of the Aliṣar I vases are monochrome, being covered with a red slip: their repertory of shapes differs perceptibly from that in vogue in the west, yet it includes some western forms like the squat wide-mouthed jugs.[5] Let us see what it has in common with Kusura.

Ridged and grooved ornaments were used at Aliṣar,[6] less lavishly indeed than at Kusura, but scarcely less effectively, while horizontal ribs were unknown neither in Aliṣar I nor in the chalcolithic deposits.[7] The bowls, though often handleless, of *O.I.P.*, xxviii, fig. 167, are close to the plain Kusura type, *Archaeologia*, lxxxvi, pl. VI, 4. At both sites, potters perfected a brilliant red burnished slip.[8] A pleasing darkish red, like red madder, occurs at Kusura, Aliṣar, Alaca Hüyük, Kültepe, and Haṣhüyük.[9] It is significant that Haşhüyük, situated in the bow of the Halys river, has yielded fragments of bowls with carinated rims very like some sherds from Kusura, as well as a ware with zones reserved in the manner described on p. 236 above.

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[1] These began in period A: cf. *Archaeologia*, lxxxvi, 15.

[2] *B.M. Cat.*, i, part 1, pl. 1; *Thermi*, pls. VIII, 140; XXXV, 115.

[3] *B.M. Cat.*, i, part 1, A 55; *Thermi*, pl. VIII, 284.

[4] *B.M. Cat.*, i, part 1, pl. 1.

[5] Compare *O.I.P.*, xxviii, fig. 168, *d* 2763 with *S.S.* 722, and *Archaeologia*, lxxxvi, pl. VII, 5.

[6] *O.I.P.*, xxviii, fig. 166.

[7] *Op. cit.*, *loc. cit.*, nos. 2 and 7; fig. 75, *e* 1617; fig. 76, *c* 1509.

[8] *Op. cit.*, 152, pl. III, 1, 2.

[9] I have examined this material at Ankara. The new excavations at Alaca Hüyük are published in *Belleten*, i, 181 ff.; further reports and illustrations in *La Turquie Kamaliste*, xv, 2–8, and *Illustrated*

In view of these considerations, and the combination of eastern and western elements found at Ahlatlıbel near Ankara,[1] I am inclined to think that the transition from the western to the eastern cultural zone was more gradual than has been hitherto supposed, and to stress the fundamental kinship of the primitive Anatolian peoples. Kusura itself, though intimately associated with the west during period B, must have maintained contact with the states and cities on the other side and acted, perhaps, as an intermediary. Already during period A, its products had furnished points for comparison with both areas, but the eastern features, on the whole, had predominated.[2] Yet the A wares developed gradually, not suddenly, into the B wares, and it seems obvious that the new inhabitants, who caused the town in period B to expand so rapidly, were the near relations of the first settlers.

The Transitional Ware. Its vases were usually turned on a slow wheel, though one or two seem to be hand-made imitations. The clay is buff or, in a few pieces, red; the surfaces are occasionally plain, but more often coated with a matt red wash or a red slip, polished or otherwise. Many bowls, however, have their interiors left in the colour of the clay except for a band of wash or slip at the rim. Sometimes a red cross is painted inside (fig. 14, no. 13). Plastic ornaments take the form of knobs, half moons, and curves. Typical rims are shown in fig. 14, nos. 1–14, 16, and 17: most are from bowls, but 1 and 11 must be jars, and no. 17 looks like a cup. No. 16 is from one of the bowls mentioned in connexion with rooms 1 and 2; their handles often stick up in a direction which is not far from vertical. No. 18 is surely the base of one of the much discussed 'Trojan goblets': it seems to have been made locally, of buff clay with red polished slip. From XI 95·5–95·25 m. These goblets were manufactured not only at Troy but also at Alişar; other examples have been unearthed at Bozüyük, Gordion, Haşhüyük, Kültepe, Alaca Hüyük, and Mersin;[3] but since the Trojan prototypes were found in the second, third, and fourth cities, only an approximate date can be given them.[4]

This ware was found here and there in areas V and XI between 94 and 94·5 m.; from 94·5–96 m. it was well represented; above 96 m. it quickly died out, and was replaced by C wares. In Pit XII its lower limit was 95·5, its upper limit just above 100 m.

The red-cross bowls are our link with Troy V, which may be dated provisionally round about 2000 B.C.[5]

Period C. At the end of the transitional period and at the beginning of period C

London News, 9 April, 1938. The short notices which have appeared on the Haşhüyük finds are recorded on p. 127 of *P.F.K.*

[1] *Türk Tarih*, ii, 3 ff.; *P.F.K.*, 60–1, 72–4. Some of the Ahlatlıbel bowls are very like specimens from Kusura: *Türk Tarih*, ii, 12 ff.

[2] The vases found in the cemetery during 1936 are believed to belong to period A: see *Archaeologia*, lxxxvi, 16, 58, 59. Several of those on *op. cit.*, pl. x, recall cups and jugs from Alişar I; in particular *O.I.P.*, xxviii, fig. 170, *c* 915, *d* 2828, *e* 1440, and fig. 171, *c* 754.

[3] *P.F.K.*, 68, pls. XII, 1, 2, XVII; *O.I.P.*, xxx, 425; the example from Mersin was reported in a lecture by Professor Garstang.

[4] *A.J.A.*, xxxix, 8, 557, 561, 562; xli, 21.

[5] References, *Archaeologia*, lxxxvi, 4.

there was a remarkable increase in the proportion of coarse domestic wares. This was noticed during the second season, 1936, when I was reminded of the rough pottery which preceded the introduction of the quick wheel into Lesbos,[1] and confirmed in 1937 by pit XII. A basket labelled XII, 99·75–99·5 m. proved to contain quantities of coarse, broken cooking-pots and jars, with only one fine, wheel-made sherd. The products of the next layer were corroded: then, at 99·3–99 m. came a collection of fragments,

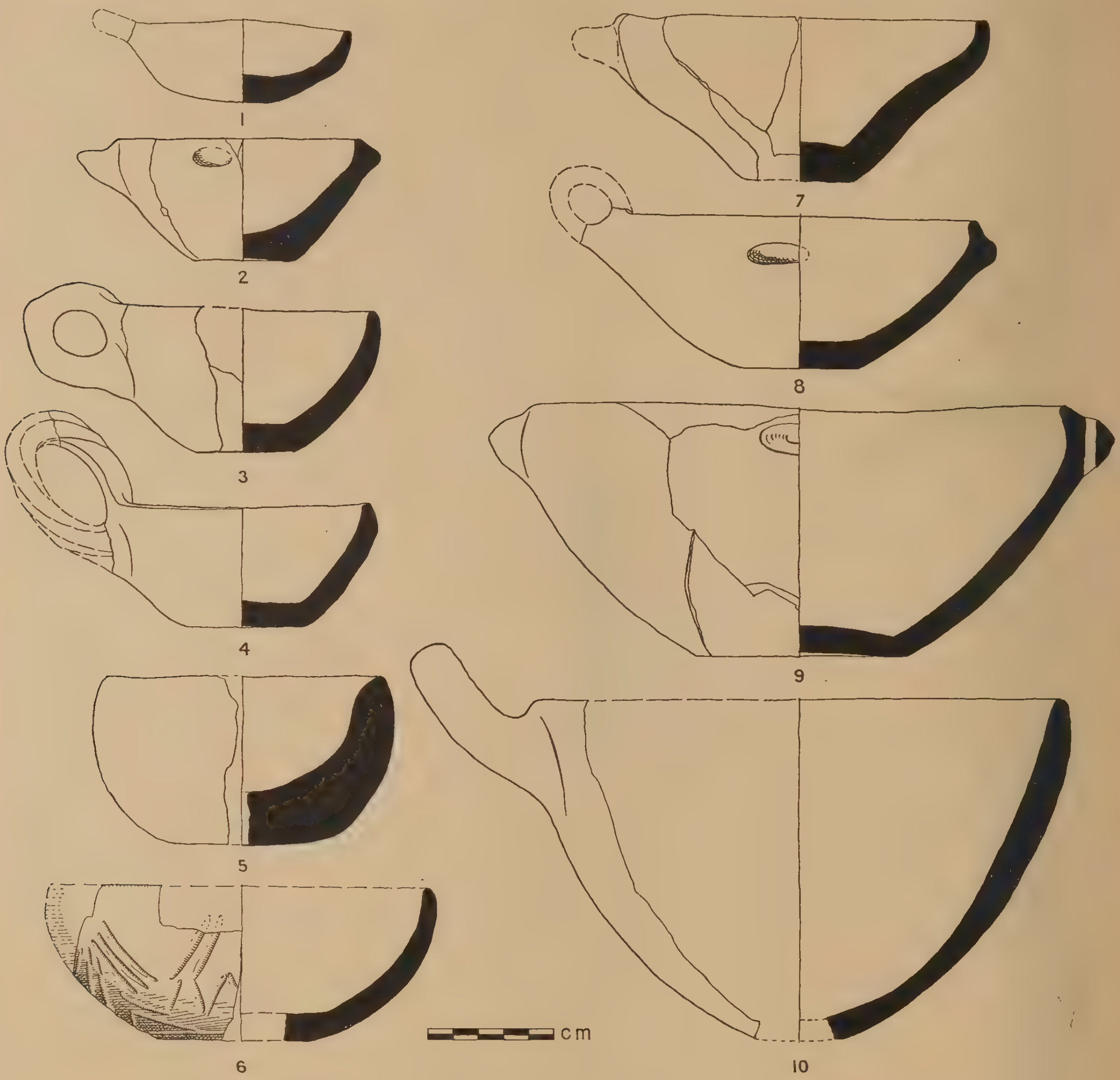

Fig. 8. Bowls, period B

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[1] *Archaeologia*, lxxxvi, 11.

twelve of which were wheel-made, two or three turned on a slow wheel, and fifty-five coarse. In area X, we counted more coarse sherds than usual by the earliest walls, (marked P and Q on the plan); but there were plenty of C wares there too, and the lowest deposits in areas III, VIII, and other parts of X yielded material of the normal C type.

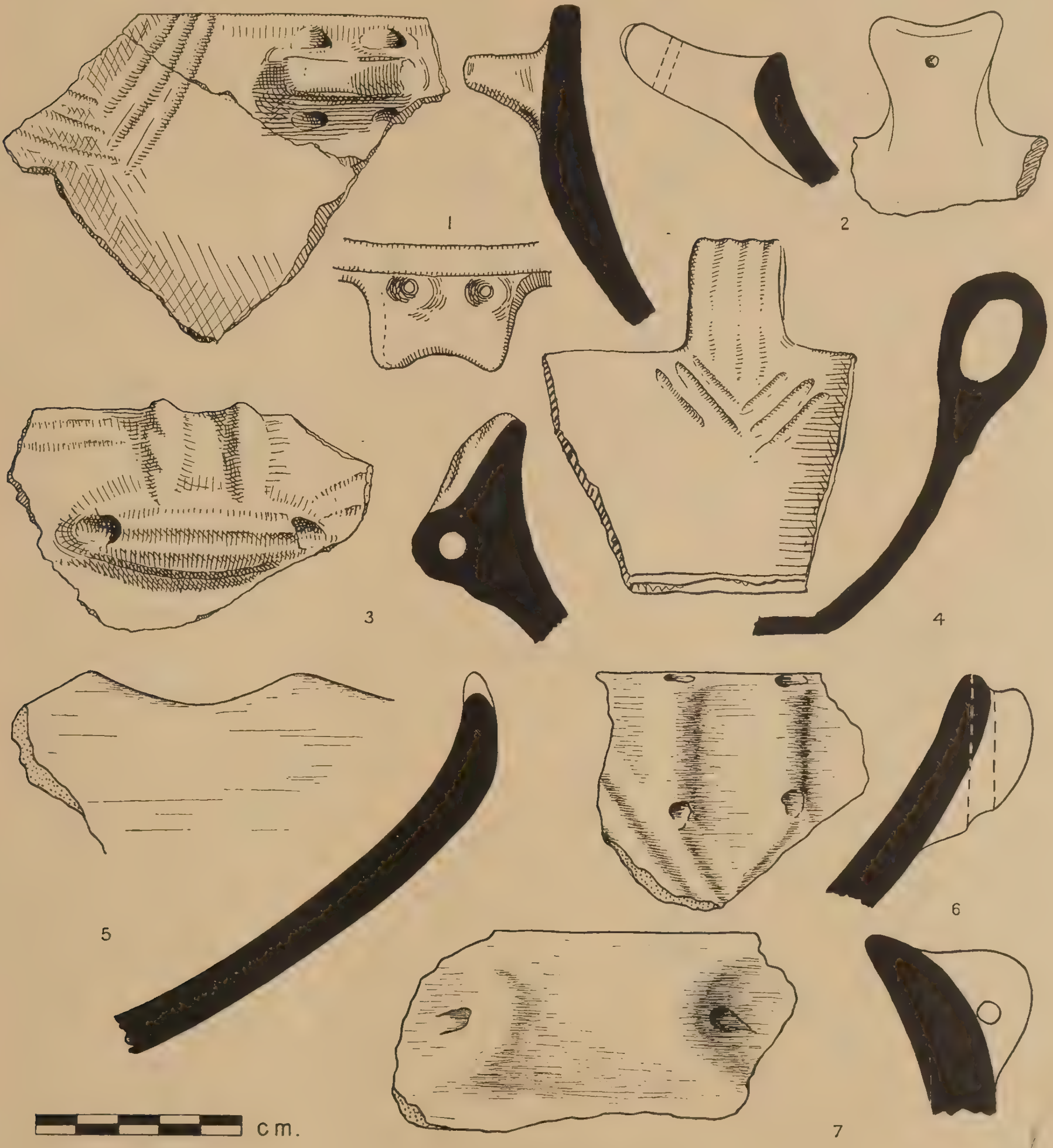

Fig. 9. Fragments of bowls, period B

This is illustrated in figs. 15 and 16, and by two of the vases, 1 and 10, on pl. LXXXIII; see also *Archaeologia*, lxxxvi, pl. VIII, 4–10; fig. 8, nos. 2, 4–6, and figs. 9, 10. The perforated dish and the two-handled jar, nos. 1 and 10 on fig. 15 below, are new shapes; new also are some of the experiments in decoration on fig. 16.

On the first page of my report I expressed the opinion that Kusura at this stage was 'Hittite in the wide sense of the term', and the statement requires proof. For undoubtedly many Hittite forms are absent at Kusura, notably bowls with conical bases, 'tea-pots', flasks, bottles, and attachments in the form of animals' heads. On the other hand, our site has its own types of jugs, jars, and spouted vessels, and it specializes in stemmed goblets which find no counterpart at Bogazköy or Alişar.

I became convinced that a definite connexion existed between the main Hittite centres and Kusura when studying the finds from the former in the Ankara and Istanbul museums. The quality of the wares was in many cases the same: the burnished reds, the browns, and, most striking of all, the buffs, which were identical at Kusura, Alişar, and Alaca Hüyük. At the same time a number of shapes, familiar from Kusura, attracted my attention: these were augmented when the most recent publications from Alişar and Bogazköy appeared.[1] Finally, Dr. von der Osten, after examining some of our specimens, stated quite independently that he believed them to belong to the Hittite group, a group which, though coherent, has pronounced local variations.

Here is a list of the parallels between vases from Kusura and the three important settlements mentioned above.

Bowls and dishes:

Archaeologia, lxxxvi, fig. 9, nos. 2–4, and finer versions of the same form. Compare *M.D.O.G.*, lxxiv, 12, fig. 4*c*: this type is slipped and burnished in parallel lines (*ibid.*, 13, 14), a practice common at Kusura.

Fig. 15, no. 6, somewhat deeper than the above. Compare some of the bowls on fig. 166 of *O.I.P.*, xxix.

Archaeologia, lxxxvi, fig. 9, no. 7. For the rim see *BK.K.*, pl. 35, no. 23; *M.D.O.G.*, lxxiv, 47, fig. 36, no. 1.

Archaeologia, lxxxvi, fig. 9, no. 3, and variants with more sharply carinated outline, very common. Compare *BK.K.*, pl. 34, no. 14, and an excellent buff example from another Hittite centre.[2]

Archaeologia, lxxxvi, fig. 9, no. 8. Compare *BK.K.*, pl. 36, no. 2; *M.D.O.G.*, lxxiv, 55, fig. 42, no. 3.

Fig. 15, no. 1. The upright handles of this perforated bowl recall *O.I.P.*, xxix, fig. 169, *d* 2983: we have also fragmentary handles applied to the rim like those in *BK.K.*, pl. 23, no. 3.

Jugs, beaked:

Archaeologia, lxxxvi, pl. VIII, 10. Compare *Belleten* I, 239, fig. 6, with its cut-away beak and the ridge on the back of its handle.

Jugs with 'bearded spouts': see *Archaeologia*, lxxxvi, 28.

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[1] *BK.K.* and *O.I.P.*, xxviii–xxx.

[2] At Ankara. Unpublished.

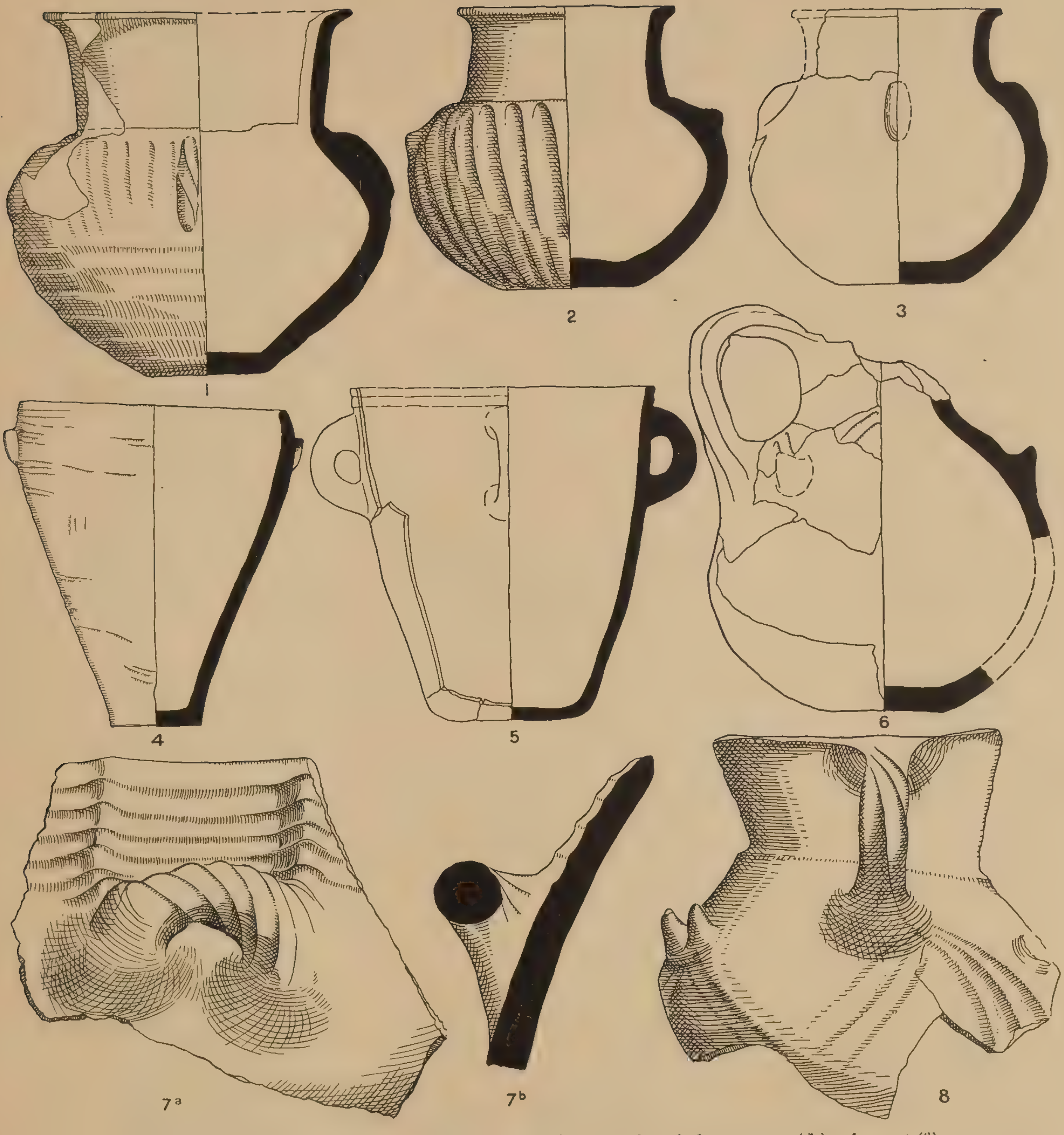
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Fig. 10. Pottery: nos. 1–4, 6–8, period B; no. 5, transitional period; nos. 4, 5 ($\frac{1}{10}$); the rest ($\frac{2}{5}$)

Jugs, trefoil-mouthed:

Archaeologia, lxxxvi, pl. VIII, 6. The new publications show that I was wrong in thinking that the trefoil-mouth was not popular during the Hittite period: see *O.I.P.*, xxix, figs. 179, 180, 182; *BK.K.*, pl. 27, nos. 7, 8; pl. 28, no. 1; also the descriptions and references to jugs from Kültepe, *ibid.*, 44.

Pot-stands: see *Archaeologia*, lxxxvi, 28.

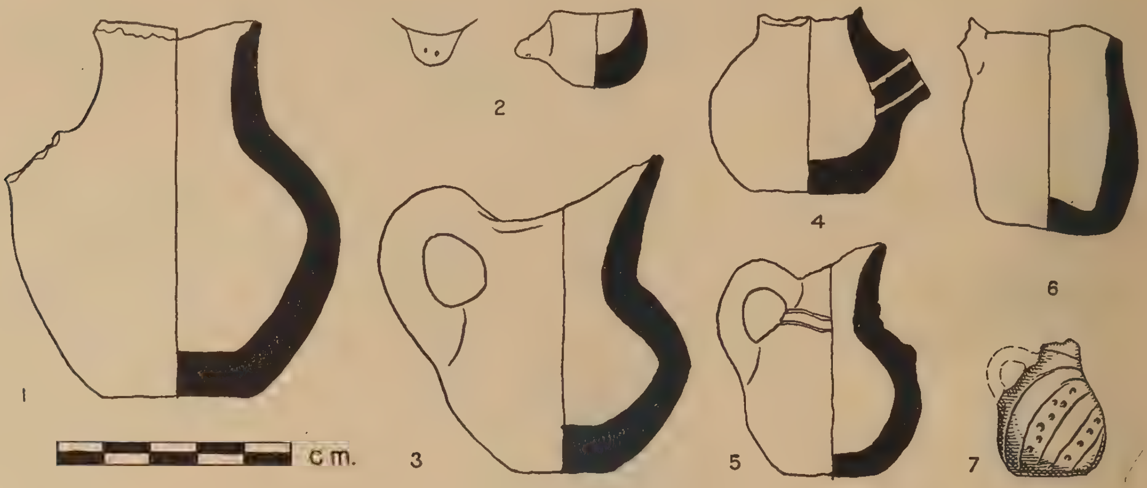


Fig. 11. Miniature vases: nos. 1–4, 6, 7, period B; no. 5, transitional

Vase shaped like a bunch of grapes:

We have two fragments in buff ware, like *O.I.P.*, xxix, fig. 192, *d* 2343, *d* 2344: the vase to which they belong may have been made on the spot, or imported.

Description of the pottery in pls. LXXXIII *and* LXXXIV; *figs.* 8–16. *Restorations, if obvious, are not mentioned. Heights may be gathered from the scales.*

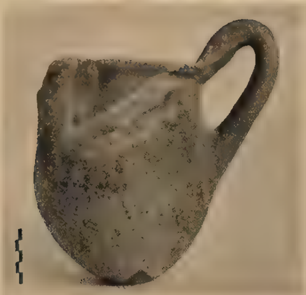
Pl. LXXXIII. *The vases come from period B, and are hand-made with two exceptions: nos. 1 and 10, which are from period C.*

1. See also fig. 15, no. 12. Jug. The lip has been ground down in front, perhaps because it was once a normal trefoil-mouth, broken and reshaped in antiquity. The rim is restored at one side, but the side shown in the plate indicates the original form. Coarse red-buff clay, thin red wash which covers inside of rim. Wheel-made. From V, 97·25 m. Period C.

2. Jug with three knobs and three feet, one restored, which give the impression of running round in a circle. Rim chipped. Polished black ware. From V, room 6, 93·75–93·6 m.

3. Collar-necked jar with two small and two larger knobs. Light grey clay, dark grey polished slip. From XI, 93·5–93·25 m.

4. Cooking-pot with four horse-shoe lugs. Coarse greyish red ware. From XI, 93·5–93·25 m.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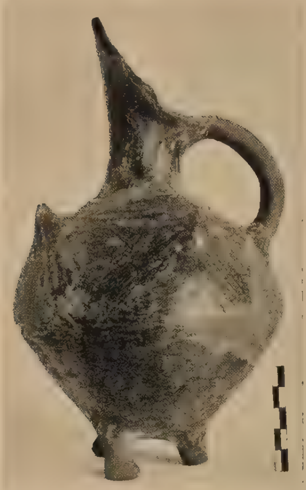
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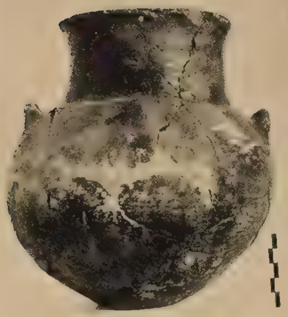
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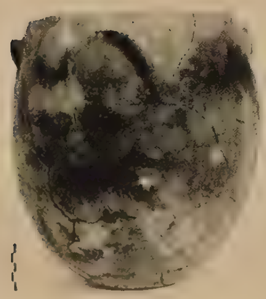
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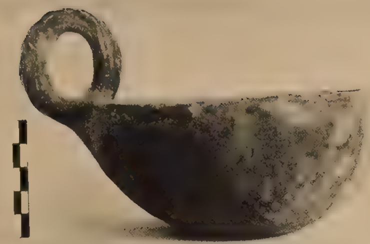
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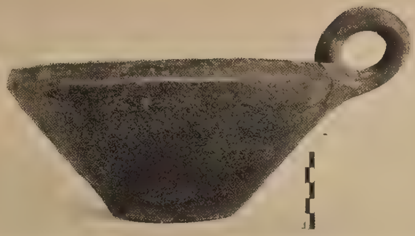
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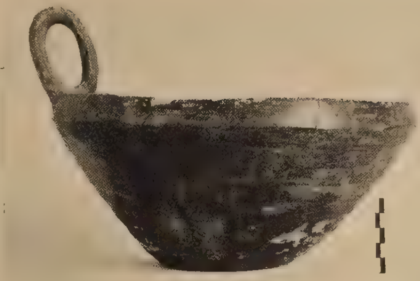
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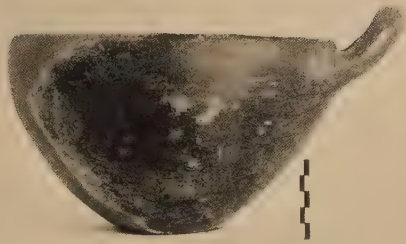
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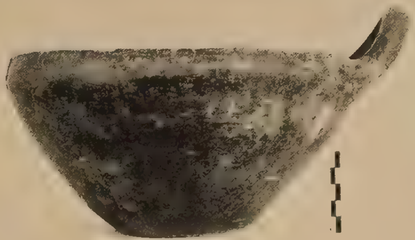
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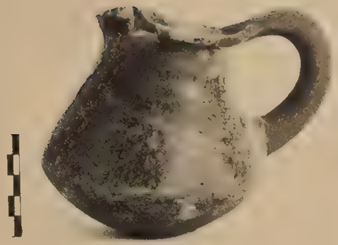
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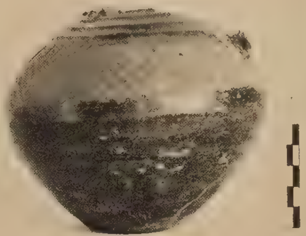
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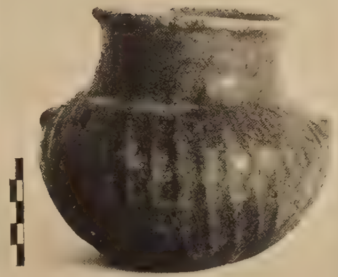
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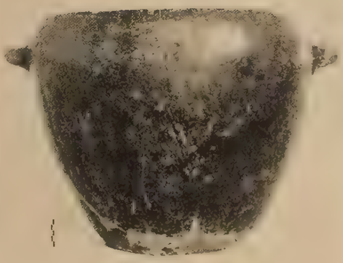
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Vases: nos. 2–9, 11–13, period B; nos. 1, 10, period C.

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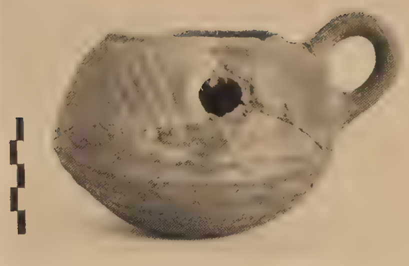

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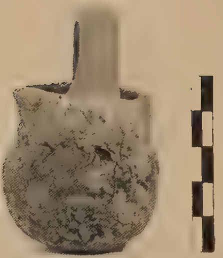

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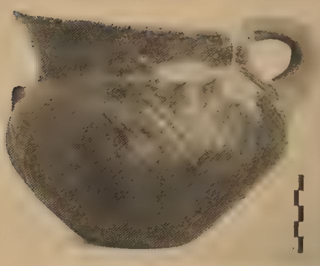

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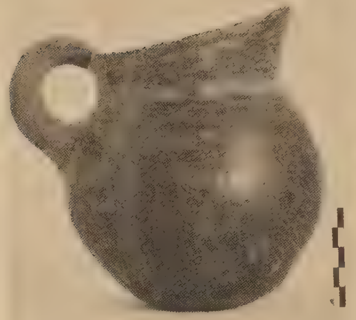

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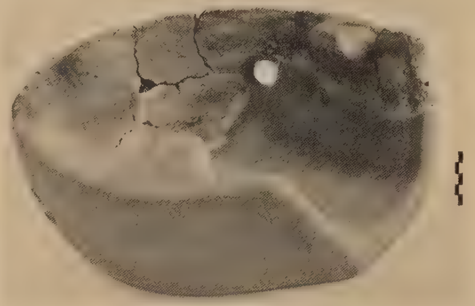

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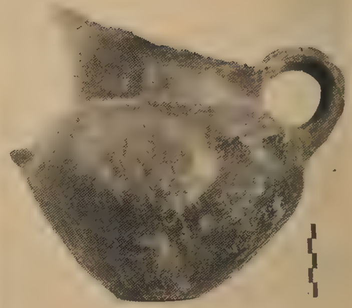

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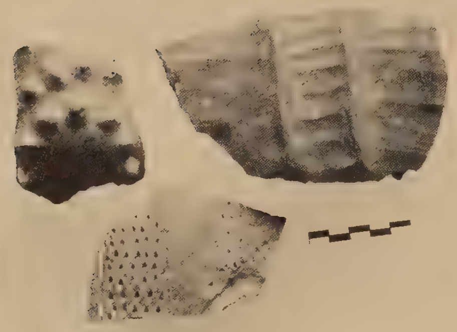

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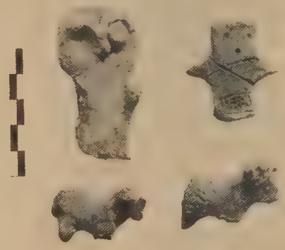

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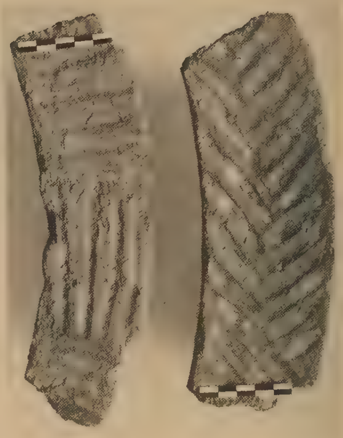

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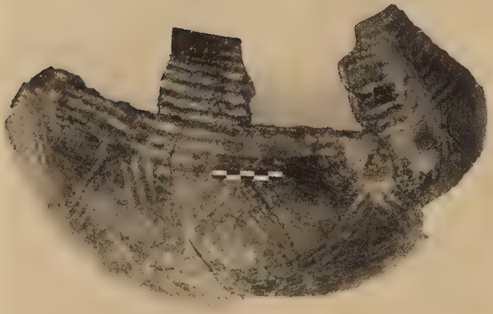

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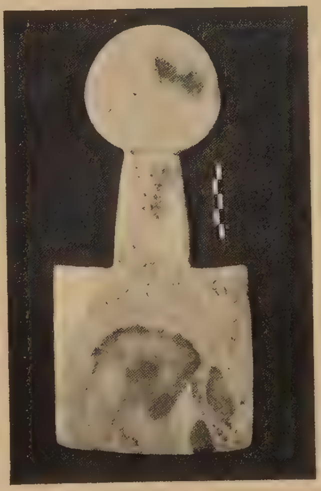

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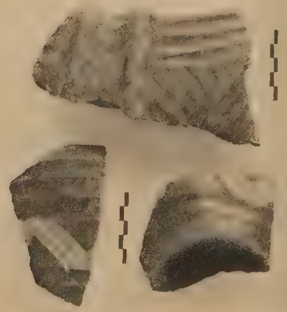

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Vases, period B; sherds, period B and transitional; terracotta and stone statuettes.

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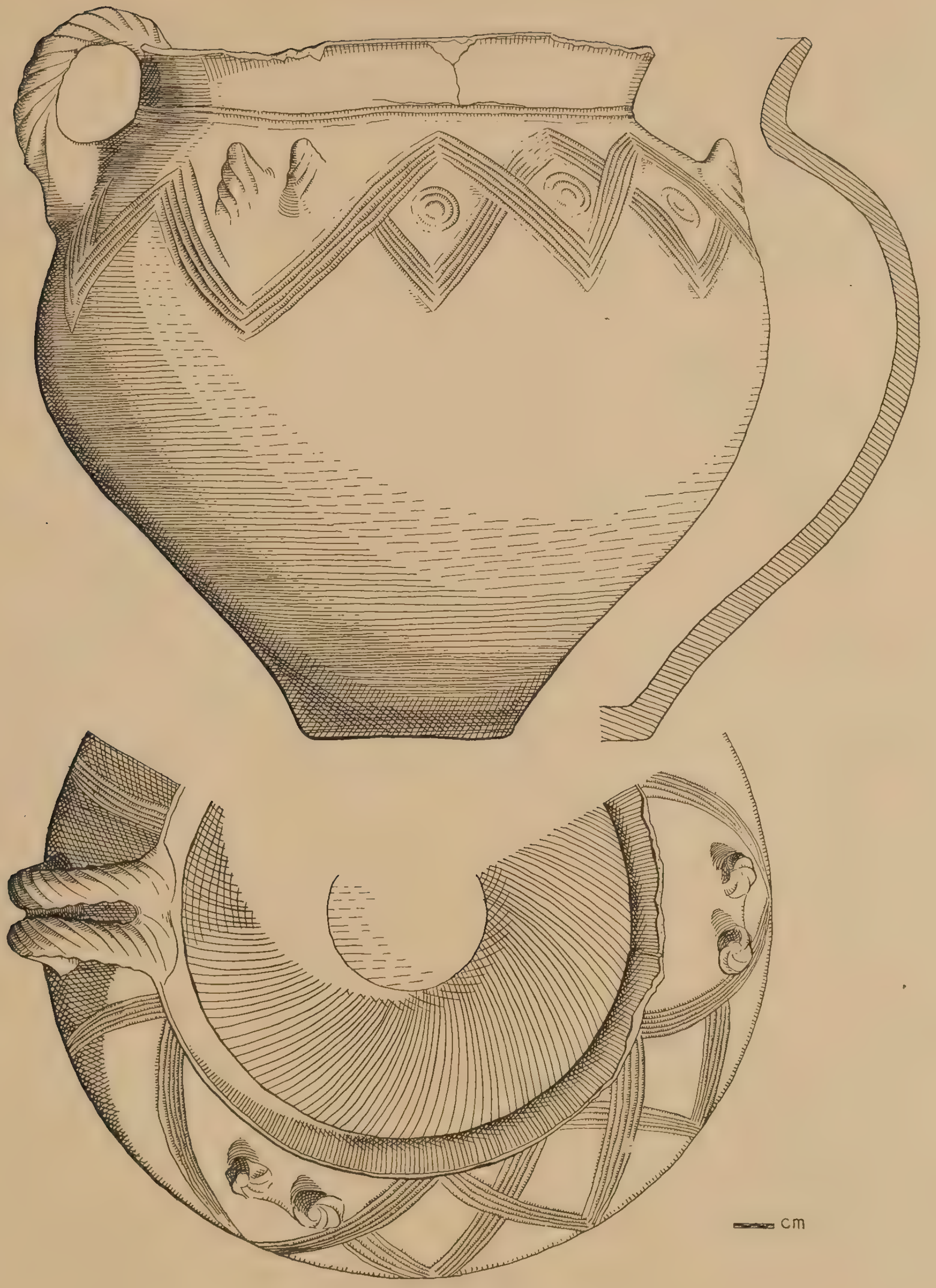

Fig. 12. Decorated jar, period B

5. Bowl with twisted handle. Body decorated with impressed chevrons and horizontal lines near the base. Red clay, red slip polished both sides. From V, in wall of trench, 94·5–94 m.

6. Bowl with twisted handle. Red clay, red slip polished outside, less well inside. From V, room 5, 93·5–93·25 m.

7. Bowl with impressed chevrons on the handle. Red clay, red slip polished both sides. From XI, room 8, 93·3–93·1 m.

8. See also fig. 8, no. 10. Bowl, half restored. Red-brown clay with greyish core, covered with streaky brown slip or paint. From V, 94–93·75 m.

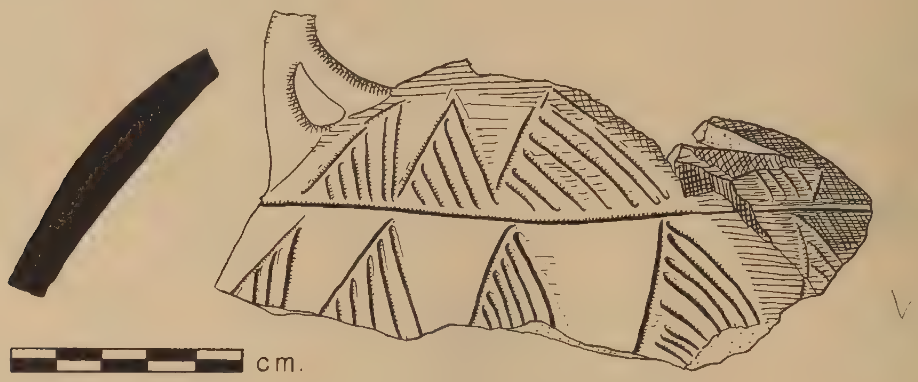

Fig. 13. Fragment of incised jug, transitional period

9. Bowl. Red clay, red slip polished both sides. From XI, room 8, 93·3–93·1 m.

10. Trefoil-mouthed jug with handle and part of lip restored. Buff clay, red slip polished in parts and covering inside of rim. Wheel-made. From XI, 95·4 m., a transitional stratum containing some C types, of which this vase is one.

11. Jug. Neck, handle, and lip missing. Red clay, red slip highly polished. A reserved band has been produced by the scraping away of the slip. This was done by the implement which made the grooved patterns. From XI, north of room 9, 92·8 m.

12. See also fig. 10, no. 2. Collar-necked jar with two lugs. Black ware, polished outside. From V, room 6, 93·3–93·2 m.

13. Two-handled jar with one handle restored. Red clay, light red polished slip outside and on lip. From XI, room 8, 93·3–1 m.

Pl. LXXXIV. *All the vases and sherds are hand-made, and belong to period B, except the fragment with incised and punctured decoration.*

1. Side-spouted vessel. Red-buff clay and slip, polished outside. From XI, room 8, 93·3–93·1 m.

2. Jug with basket-handle (restored). Coarse red-buff clay. From V, 89·4–89·2 m., above virgin soil.

3. Jug with six knobs. Black ware, polished outside and inside lip. From V, room 3, 92·5–92·45 m.

4. Jug. Red clay, red polished slip outside, and inside lip. From V, room 3, 93·4–93·2 m.

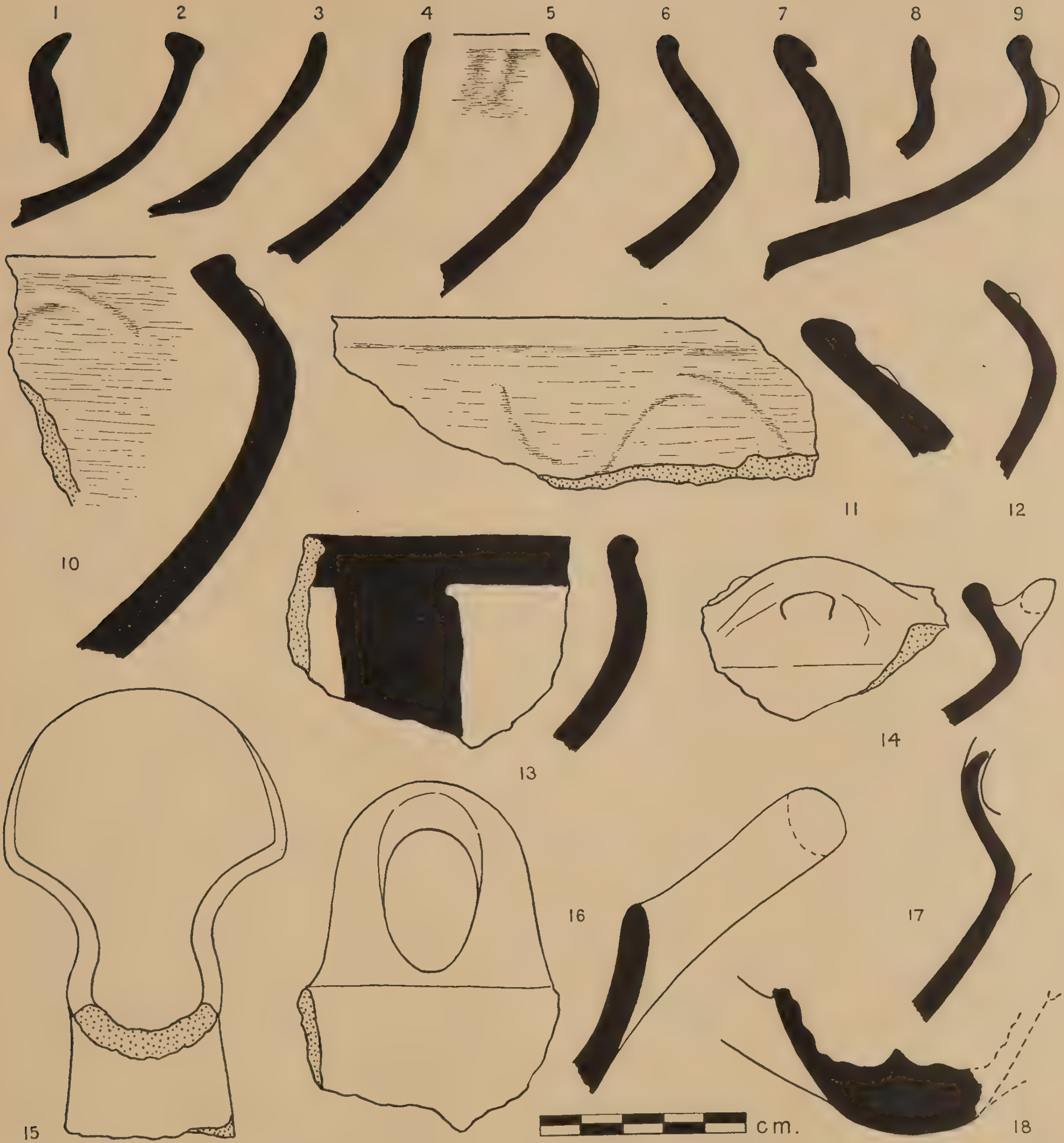
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Fig. 14. Sherds of transitional ware, no. 15 excepted

5. Brazier or stand, partly restored. There are three projections, one restored, and two air-holes. Coarse grey-black ware, fired buff on the surface: traces of burning inside. If the vessel contained hot coals, a pot could have been stood on the projections and heated. From V, 93·8–93·6 m.

6. Jug with slightly twisted handle, six pointed bosses, and scarcely visible ribbed decoration. Dark grey clay, with dark grey polished slip, which also covers lip inside. From XI, room 9, 92·6–92·4 m.

7. Three sherds. One is the lower part of a knobbed bowl. The knobs recall our fragments of grape-cluster vases belonging to period C (see p. 242), but this piece has the beginnings of a base. Grey-buff clay, polished, especially inside. From V, room 6, 93·5–93·2 m. One is a rim, of grey clay polished both sides. From V, 92·5–92 m. One is punctured and incised, with white filling. Alien blue-grey clay, matt surface, signs of turning on a slow wheel. Probably an import. From XI, 96·75–96·5 m.

9. Pithos rims, of red clay with red slip, the shape as *Archaeologia*, lxxxvi, 15, fig. 5, no. 2. The one on the left is from V, 90–89·75 m.; the one on the right from V, room 5, 94·25–94 m.

10. Fragment of pithos. Reddish grey clay, red polished slip outside.

12. Three sherds. Rim with vertical bars, of reddish grey clay with red polished slip on both sides. From XI, 93–92 m., in wall of trench. Rim of bowl like pl. LXXXIII, 6, 7, with scraped decoration showing the buff clay below the red slip. Exterior polished. From X, 100·5–100 m., a stray. Base of bowl, similar to last except that the clay is red and the inside has been burnt black. From V, 93·8–93·6 m.

Fig. 8. *A group of bowls, hand-made, from period B.*

1. Bowl, of light red clay, unpolished. From V, room 7, 92·55 m.

2. Bowl with four lugs, one vertically pierced. Red-buff clay, polished on both sides. From V, room 5, 93·75–93·5 m.

3. Bowl. Grey clay, with traces of slip and polish. From V, 93·75–93·5 m.

4. Bowl with twisted handle. Dark grey clay, greyish buff slip polished both sides. From XI, room 8, 93·1–93 m.

5. Bowl, of coarse ware. Record missing.

6. Fragmentary bowl, of buff clay, smoother and darker outside. From V, 93·5–93·25 m.

7. Bowl with small handle partly restored. Coarse grey clay, grey slip, slight polish both sides. From V, 94·25–94 m.

8. Bowl with three knobs. Red clay and red slip, fairly well polished both sides. From XI, room 8, 93·3–93·1 m.

9. Bowl with two pierced and two unpierced lugs. Dark grey ware polished both sides. From V, 94·25–94 m.

10. See pl. LXXXIII, 8.

Fig. 9. *Fragments of hand-made bowls from period B.*

1. Rim of bowl with lugs. Red clay, red burnished surface with black patches. From V, 92–91·75 m.

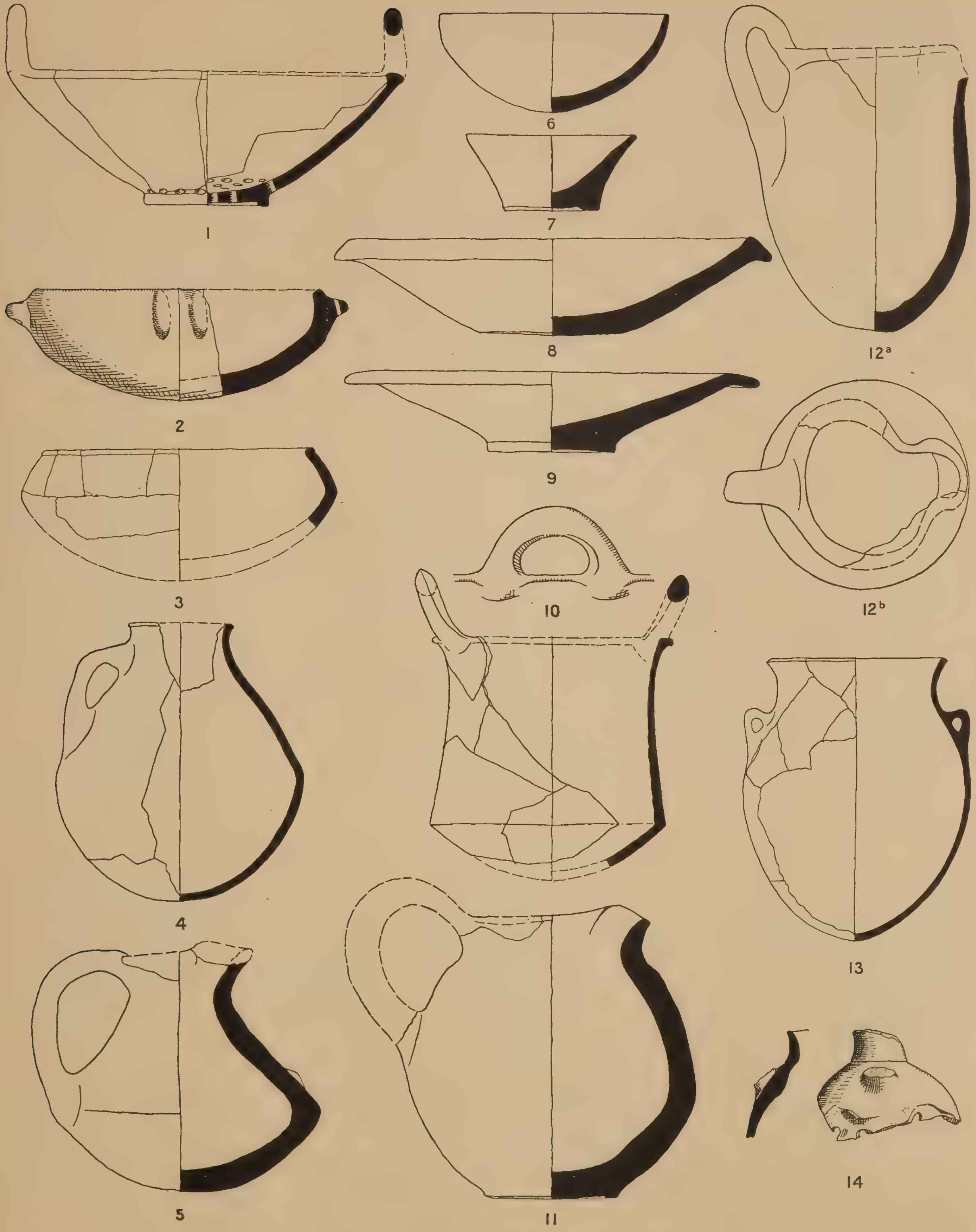
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Fig. 15. Pottery, period C: nos. 1, 3, 4, 10, 12 ($\frac{1}{5}$); no. 13 ($\frac{1}{10}$); the rest ($\frac{2}{5}$)

2. Lug and part of rim of bowl. Grey-buff clay, discoloured red slip. From XII, 94·5–94 m.

3. Rim of bowl with tubular lug. Red burnished surface stained black. From V, 92–91·75 m.

4. Rim of bowl with impressed pattern inside at base of handle. Red polished slip both sides. From V, 93·6–93·5 m.

5. Rim of bowl with double ears. Grey-brown clay, red-brown polished slip outside, grey-brown inside, probably due to firing. From XI, 92·5–92·25 m.

6. Rim of bowl with two vertically pierced lugs. Red-grey clay, red slip with traces of polish outside. From V, 89·3–89·1 m.

7. Rim of bowl with tubular lug. Grey-buff clay, light brown slip polished outside. From XI, 93·25–93 m.

Fig. 10. *All these vases are hand-made, and all belong to period B, except no 5.*

1. Collar-necked jar with four knobs. Brownish red clay with buff surface; brown-black slip or paint. From V, room 7, 93 m. Period B.

2. See pl. LXXXIII, 12.

3. Part of a collar-necked jar with four knobs. Coarse dark grey clay with smooth surface. From XI, 92·75 m.

4. Store jar with two lunate lugs. The body is covered with grooves and ridges caused by drawing the finger or some tool in various directions. Coarse greyish red clay. From V, room 7: found in front of the niche, with its rim just above the 92·85 floor.

5. Jar with two handles, of coarse reddish grey clay. From XI, room 7, 94·56–94·05 m. The jar contained a burial attributed to the transitional period, p. 228.

6. Jug with three knobs and irregularly impressed decoration. Greyish buff clay and slip, polished outside. From XI, 92·75–92·5 m.

7. Sherd of coarse red clay with red slip outside. From V, 94·5–94·25 m.

8. Part of jug. Grey clay with darker grey slip which covers inside of neck. From V, room 5, 93·4–93·2 m.

Fig. 11. *Miniature Vases. All are hand-made, from period B, except no.* 5.

1. Jug. Buff clay, polished red slip. From XI, 93·25–93 m.

2. Bowl, of coarse black ware. From V, outside room 3, 93·5–93·25 m.

3. Jug. Red clay, red slip. From V, room 3, 93·4–93·2 m.

4. Jug with strainer spout. Buff to black ware with grey core. From V, room 7, 92·4–92·3 m.

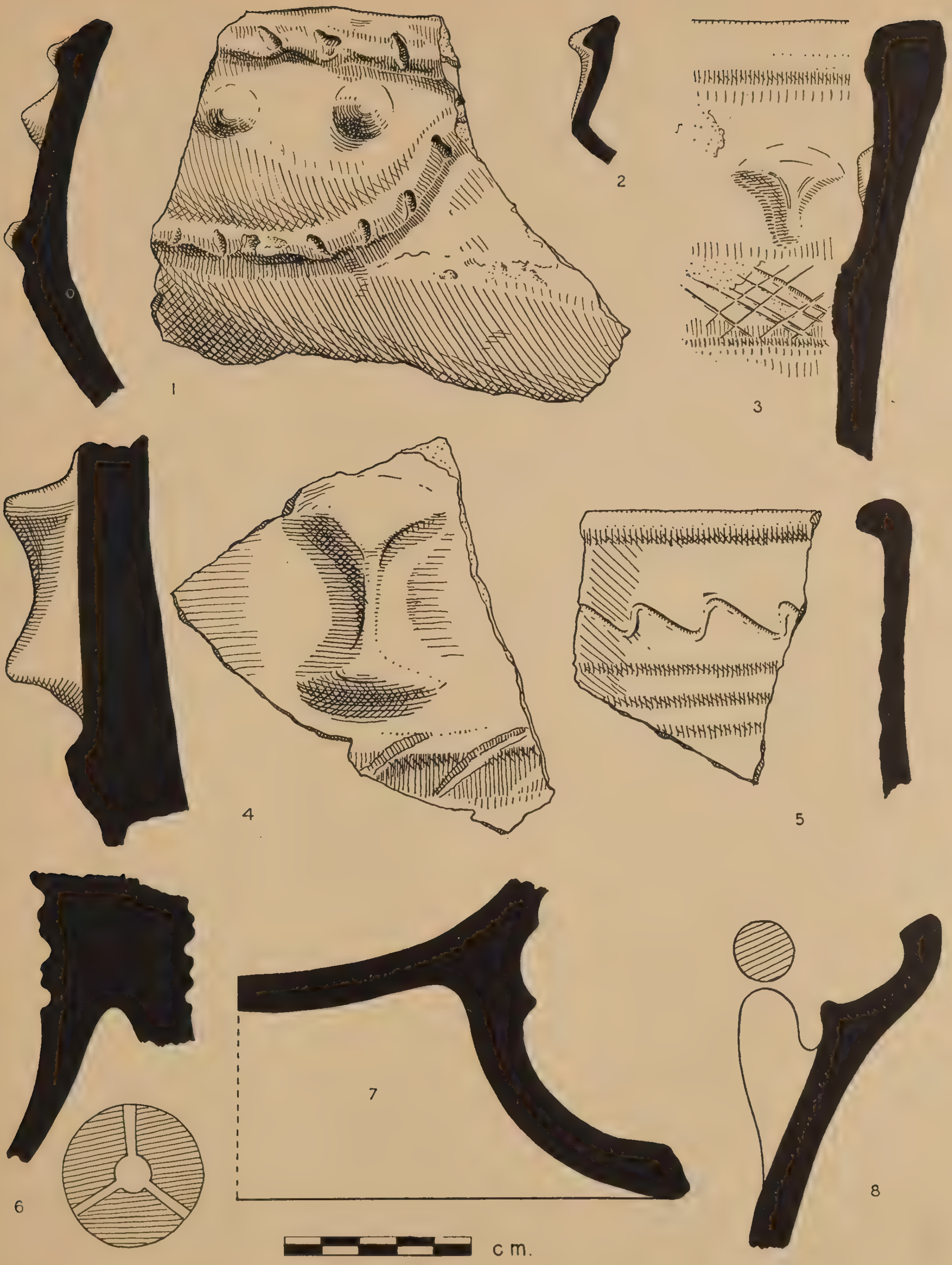
5. Jug with three plastic knobs. Red ware, red polished slip outside and also inside lip. From XI, child's grave (p. 228), 94·25 m.

6. Mug or ladle, of grey-buff clay with smooth surface. From V, 90·8 m.

7. Jug with incised decoration and white fill. Greyish buff clay. From V, 90·1–89·9 m.

Fig. 12. *Decorated jar.*

The pithos from room 6 (p. 226). It has double twisted handles, and six twisted knobs. Red clay, red slip, which covers the outside of the vase and the inside of the lip. Ht., 0·84 m. Found in room 6 between 93·69 and 94·35 m. Period B.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cm.

Fig. 16. Pottery, period C

Fig. 13. *Fragment of incised ware.*

Handle and shoulder of jug, unusual in shape and decoration. Red clay, smooth surface outside with hatched triangles. No trace of white fill. From V, 95·75–95·5 m., a transitional stratum.

Fig. 14. *Transitional ware, no. 15 excepted.*

All these sherds except no. 15 belong to the class discussed on p. 237. No. 16 is one of the bowls found in such quantities in XI, rooms 1 and 2: see p. 237. No. 18 is the possible fragment of a two-handled goblet described on p. 237. No. 15, of polished black ware, comes from V, 92–91·7 m., and is mentioned on p. 236.

Fig. 15. *Vases from period C, all wheel-made unless otherwise stated.*

1. Perforated bowl or strainer, half restored, of coarse red ware. From XI, 98·5–98·25 m.

2. Part of bowl, with pairs of knobs and pierced lugs. Dark grey clay, burnished. Technique uncertain. From V, surface.

3. Bowl, most of base restored. Red clay, burnished outside on shoulder, with thin vertical lines, also burnished, below. Interior, slightly burnished. From VIII, 100·5–100 m.

4. Jug, of coarse red clay with black stains. The lower part of the body smoothed. Hand-made. From III, 100·5–100·25 m.

5. Trefoil-mouthed jug, with two small knobs in front. Polished red ware. From III, 100·8–100·75 m.

6. Bowl, of buff clay with matt red wash. From III, 101·25–101 m.

7. Bowl, of buff clay with red wash outside and patches of red inside the rim. Made on a slow wheel. From III, 100·75 m.

8. Dish, of red ware polished slightly inside, more carefully outside. From XII, 104–103 m.

9. Dish, of burnished buff ware with grey core. From XI, 98–97·75 m.

10. Two-handled jar, much restored. Red clay with smooth surface. From XI, 98·5–98·25 m.

11. Trefoil-mouthed jug, of coarse red clay. From X, 100·5–100·25 m.

12. See pl. LXXXIII, 1.

13. Amphoroid jar, of coarse red-grey clay. From III, 101–100·75 m.

14. Part of a jug. Red-buff clay with buff polished slip. From XI, 101·6–101·25 m.

Fig. 16. *Wheel-made fragments from period C.*

1. Rim of large bowl or jar, with plastic and notched ornament. Coarse reddish grey clay. From X, 102·75–102·5 m.

2. Rim of bowl with boss. Fine ware: red clay with grey core and polished buff slip. From X, surface.

3. Rim of large vessel with incised and plastic decoration. Coarse red ware. From V, 98·5–97·5 m., in side of trench.

4. Part of wall of large vessel with plastic decoration and notches. Unpolished red ware. From X, surface.

5. Rim of large bowl or jar, with impressed wavy line and parallel grooves. Reddish buff clay, brown wash. From V, surface.

6. Stem of kylix, the lower part spreading into three, the upper part also divided into three parts. The section was taken at the top of the divisions. Cf. *Archaeologia*, lxxxvi, fig. 10, no. 2. Red clay with brown slip or wash. From X, 103·25–103 m.

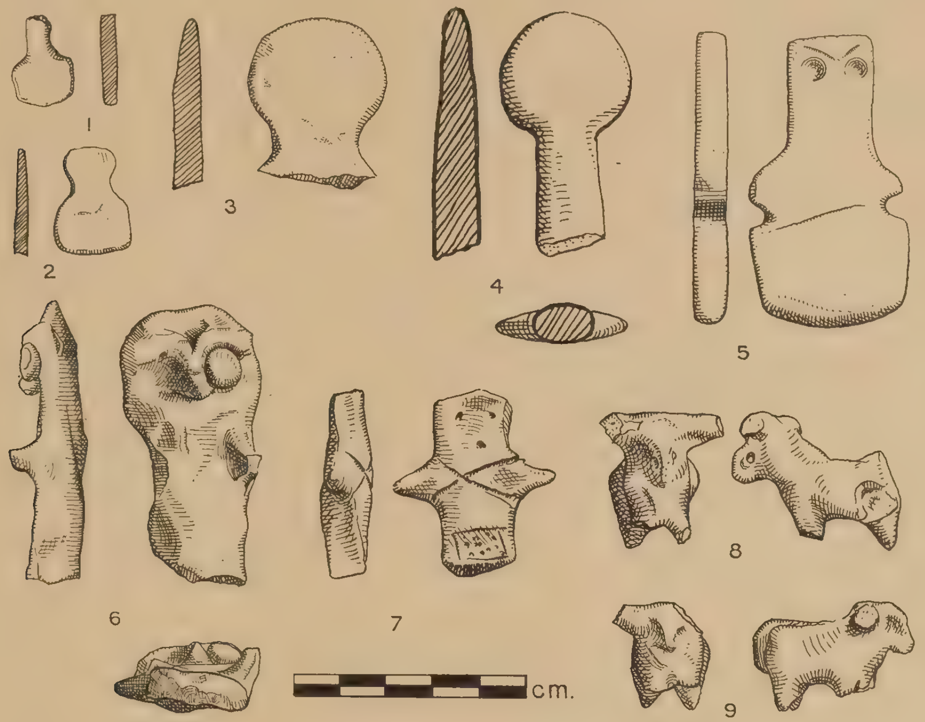

Fig. 17. Terracotta and stone statuettes

7. Foot of large vessel. Coarse red ware with grey core. From X, 100·4–100 m.

8. Rim of jar with horizontal handle. Reddish grey clay, inferior brown wash. From V, surface.

Terracotta

Human Figures.

Pl. lxxxiv, 8; fig. 17, no. 7. This is a female figure, with three punctures to show eyes and mouth, two incisions to indicate what are presumably crossed bands, and a stippled square on the lower part of the body like that on *b* 2182 from Alişar I (*O.I.P.*, xix, fig. 62). Coarse buff to black ware. From XI, room 8, at *ca.* 93 m. Period B.

Pl. lxxxiv, 8; fig. 17, no. 6. Female idol with plastic nose, eyes, and eyebrows. The arms and the lower part of the body are chipped. Coarse, dark grey ware with reddish core. From XI, 98·5–98·25 m. Period C, early.

The family to which no. 7 belongs is well distributed over Anatolia and not unknown elsewhere.[1] One of its members, from Lesbos, supports our contention that the lines across the chest are bands, for they cross again at the back, and other lines suggest a knot of cord or ribbon. That statuette, however, must be attributed to a different subdivision of our group from that represented by no. 7, for which the closest counterpart is provided by *Archaeologia*, lxxxvi, 29, fig. 11, no. 12. Dissimilar in style is no. 6, where the features are reproduced plastically by means of small lumps of clay. This device was used at Alişar in the Hittite period on certain animals' heads and idols,[1] and at Kusura on the specimen *op. cit.*, *loc. cit.*, no. 4, which must be contemporary. We may infer that the craftsmen who modelled figurines in the second millennium had mannerisms which should help us to distinguish their work, but that they had no fixed canon for the rendering of the human form.

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[1] See *Archaeologia*, lxxxvi, 28, 29; *Thermi*, 149 ff.; and *P.F.K.*, 74–5 for references.

Animals.

Pl. LXXXIV, 8; fig. 17, no. 8. A bull or cow with a pierced hole for the eyes and no tail. Horns and legs chipped. Coarse blackish buff ware. From V, west of room 3, 93·8 m. Period B.

Pl. LXXXIV, 8; fig. 17, no. 9. Probably a bull: the plastic ridge along the back would be appropriate. The position of the eyes is shown by hollows at either side of the nose. Nose, horns, and legs chipped. Dark grey clay. From V, 94·15 m. Period B, late.

Parts of four other animals, two obviously bovine, two uncertain, were found between 93 and 94·5 m.: last year's 'sheep or cow' also comes from period B. At Alişar these beasts, the natural expression of a pastoral people, were first made in the chalcolithic period, and were still common in the second millennium, our period C: elsewhere in Anatolia, they are represented both during the third millennium and afterwards at various sites.[2]

Stamp-Seals.

Fig. 18, no. 1. The 'handle' has been broken off across the hole. Red-black ware. From V, room 3, 92–91·75 m. Period B, early.

Fig. 18, no. 3. Badly chipped round the edges. Coarse, greyish buff ware, with buff slip. From XI, 92–91·73 m. Period B, early.

Fig. 18, no. 5. Rim chipped, also 'handle' above the perforation. Reddish buff ware. From VIII, 102·5–102 m. Period C.

Compare the stone seals discussed on p. 268 and illustrated in the same figure. It is not surprising that the metal seals, employed in richer communities, were absent at Kusura.

Various Small Objects.

Fig. 19, no. 9 is intriguing: at first sight, it might be taken for a bead, for each of the six bosses contains a cavity. These we examined with the conviction that one or more pairs would prove to be string-holes, but none was deeper than 0·014 m. They must have been filled with some substance, hard or soft; and the object may have been a charm, or used for some ritual purpose; or, less probably, have depended from a ring set at its apex. Buff clay; fine grey-buff slip; white fill in the grooves. From V, 90·75–90·5 m. Period B, early.

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[1] *O.I.P.*, xix, 137, fig. 173; xxix, fig. 231, *c* 677, fig. 232, *e* 898, and examples on figs. 233–5.

[2] *P.F.K.*, 41, 74; *O.I.P.*, xix, 55, 140, and figs. 174, 175; xxviii, 80, 81, 180–183; xxix, 193, 198–202; *Türk Tarih*, ii, 87; *Belleten*, i, fig. 18; *S.S.*, 7644–9; *BK.K.*, 18.

A comparison should be made with the ball covered with punctures found in 1935 at Kusura (*Archaeologia*, lxxxvi, 30, 31, fig. 12, no. 9) and the balls from Alişar I and II (*O.I.P.*, xix, 47, fig. 56, particularly *b* 620, and pp. 122, 123; xxviii, examples on fig. 204). All these balls belong to a group of terracotta lumps formed into spheres, discs, and other shapes, which occur at Alişar in the chalcolithic age and in settlements I and II.[1] As some of the flatter variants are ornamented with sun-symbols, their publishers suggest that they had a magical significance. Kusura has yielded a single disc from period B, and several from period C (*Archaeologia*, lxxxvi, 30), three of which were found in 1937.

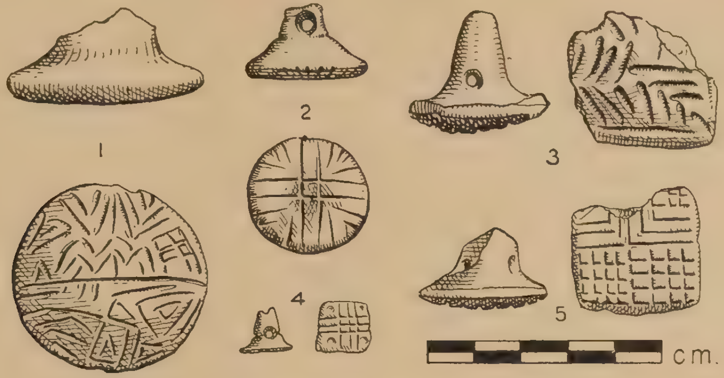

Fig. 18. Terracotta and stone stamp-seals

Fig. 19, no. 6 is shaped like a peg, but a terracotta peg would be unpractical. Grey ware, greyish black polished slip. From V, room 3, 92–91·3 m. Period B.

Two counterparts in stone have been recorded, one from our period C (*Archaeologia*, lxxxvi, 51, and fig. 12, no. 11 on p. 31), one from the chalcolithic deposits at Alişar (*O.I.P.*, xxviii, fig. 85, *e* 2026). The latter is classed among the idols, but it is conceivable that all three 'pegs' were markers of some kind.

Fig. 19, no. 7. Unpierced spool or reel, of coarse grey-buff clay. From XII, 99·75–99·5 m. Late transitional or early C: see p. 230. The spools *O.I.P.*, xxviii, fig. 277, *c* 1918 and xxix, fig. 307, bottom row, are a little thicker.

Fig. 19, no. 8. Pierced spool or reel, of similar clay. From VIII, 99·5–99·25 m. Period C, early.

One small cylinder, not illustrated, from period C, resembles no. 14 on fig. 12 of *Archaeologia*, lxxxvi, 31.

Spindle-Whorls and Beads.

The relation of the various forms to the main periods of the site was outlined on pp. 30, 34 of *Archaeologia*, lxxxvi, but it may be convenient to repeat our conclusions. They have been supported by the new material, except that one or two early types are represented in later deposits by rare survivals.

(*a*) The flattest and thinnest discs are early: one, however, occurred at 94·75 m.

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[1] *O.I.P.*, xix, 120–1, figs. 146, 147; xxviii, 93, 207; xxix, 273.

(*b*) The biconical whorls with very sharp angles, like *op. cit.*, 32, fig. 13, no. 10, belong to period A and the lower layers of period B. There are four exceptions.

(*c*) The elongated sphere of *op. cit.*, 33, fig. 14, no. 2 is absent in period C.

(*d*) *Op. cit.*, 32, fig. 13, nos. 22–31 are types belonging to period C: one exception.

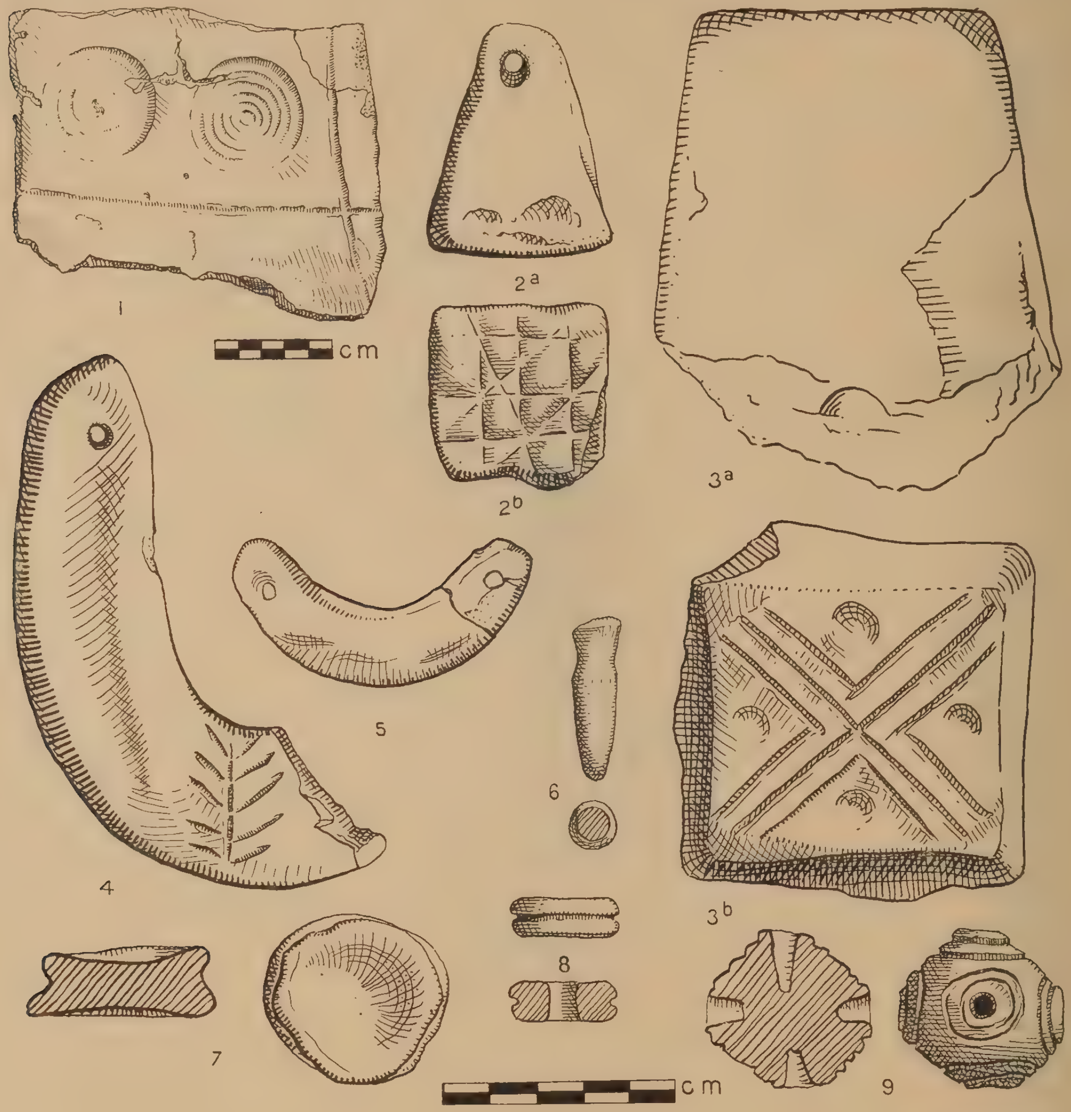
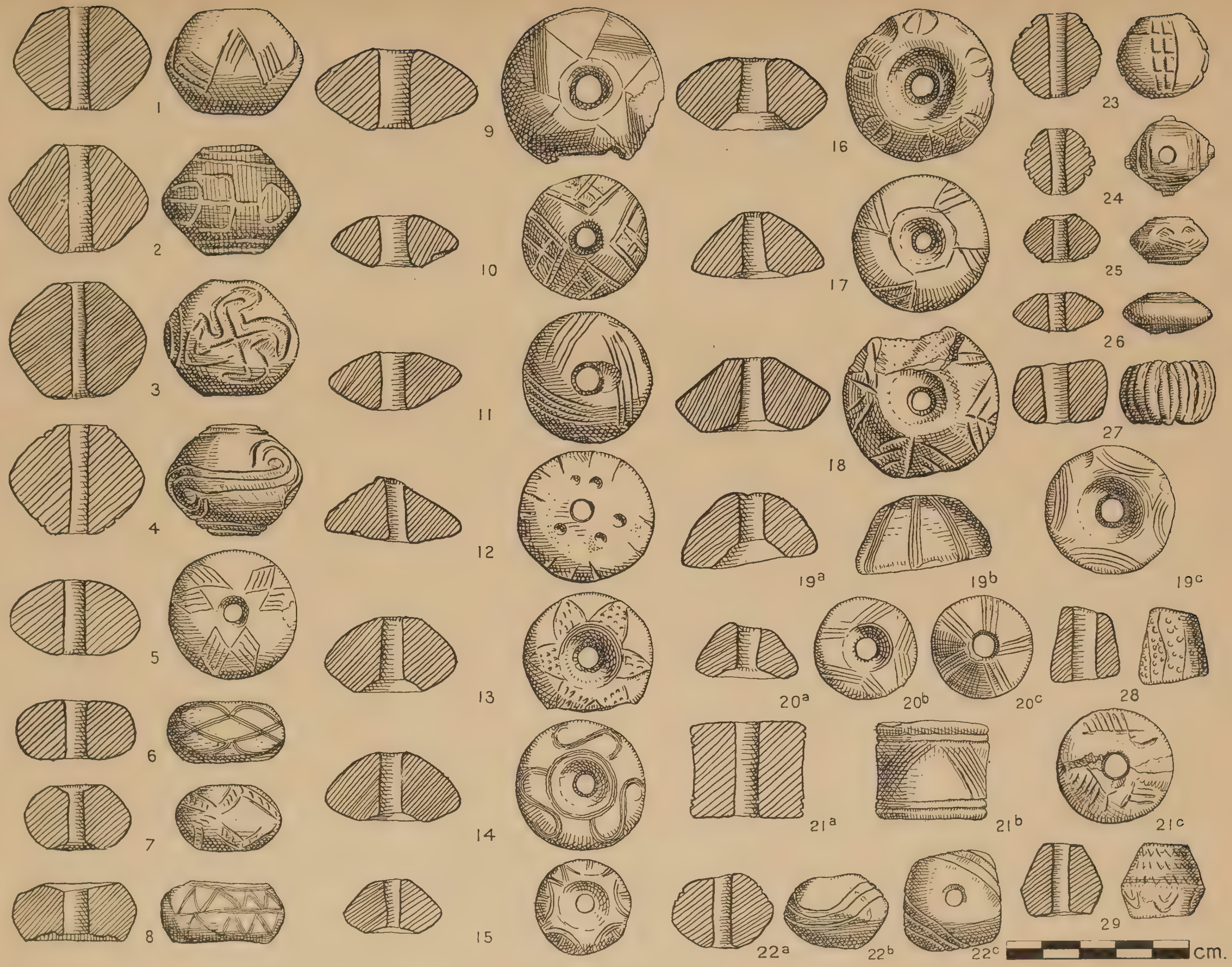


Fig. 19. Terracotta objects, various

Fig. 20 shows some new patterns and two new shapes, nos. 21 and 22, both of which are unique. If they are really spindle-whorls and not beads, the reason why they are unique will be readily understood by any one who can spin; no. 22 would revolve unevenly, no. 21 would give trouble in the winding of the thread.[1]

[1] No. 21 is from the transitional period, no. 22 from period B.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cm.

Fig. 20. Spindle-whorls

The majority of the whorls are grey, though some are buff and a few red: a good slip and polish have often been applied, and the incisions are not infrequently filled with white.

Only two small beads can be added to last year's list, one round, the other biconical, and both from period B.

Arcs.

As before, quantities of these crescent-shaped terracottas (fig. 19, nos. 4, 5), which are said to resemble certain wooden loom-weights of modern Anatolia, occurred in the strata of period C. Over thirty lay close together in a patch of soft earth associated with two loom-weights of the conventional kind (like fig. 19, no. 2), pounders, boars' teeth, goats' horns, and various animal bones.

During three years' excavation, we have found only two arcs which could have any claim to be earlier than period C, one of which is described on p. 34 of *Archaeologia*, lxxxvi. Being coarser and straighter than the others known at the time of its publication, it was considered an early type, but since then, period C has produced a few examples equally coarse and straight. I have, therefore, come to the conclusion that both the arcs called early should be viewed with suspicion: one, at any rate, could well be intrusive, for the earth wherein it was imbedded was near the sloping surface of the mound.

Fig. 19, no. 5 is remarkable in being almost as small as the west Anatolian 'arc-amulets'.[1]

Loom-weights.

Loom-weights of the classical form are not unknown at Kusura; we have one from period B, two from period C, early, and two unstratified. Compare *O.I.P.*, xxviii, 93, 207, 270; xxix, 273.

Fig. 19, no. 2. The base is decorated. Red ware. From XI, 94·25–94 m. Period B.

Spit-supports and Pounders.

Spit-supports have a tendency to split and crumble, and few were worth preserving and drawing. We noted over a dozen from period B and one from period C, all shaped more or less like *Archaeologia*, lxxxvi, 36, fig. 16, nos. 5 and 6. The position of the hole varied. Two were adorned with spots on the top and one with a cross.

Fig. 19, no. 3 displays a more ambitious design, and is made of fairly good red clay with a white surface. From V, 99–98·75 m. Period C.

From the deposit in C described above came two of the large cylinders which are sometimes called pounders. One, 0·19 m. long, resembles *Archaeologia*, lxxxvi, 36, fig. 16, no. 2; the other is similar but fragmentary. The same deposit held a terracotta cone like *op. cit.*, *loc. cit.*, no. 1, but with straighter sides: the function of such things is discussed *op. cit.*, 37. All three objects are of reddish grey or reddish buff clay.

Horns.

These are a feature of the latest occupation of the site, appearing not far below the surface of the soil on the summit of the mound. This year we worked mainly at a greater depth; in consequence, only one horn came to light. It is like the front part of the horns from the basin illustrated in last year's report (*Archaeologia*, lxxxvi, pl. v, 6), and is decorated with impressed circles which have small raised bosses in their centres.

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[1] *Thermi*, 159.

Miscellaneous.

Fig. 19, no. 1, is probably not part of a horn, but the border of a hearth or some similar structure. It is only 0·02 m. thick, the back being rough. From the surface of X. Period C.

METAL

Only four metals are represented at Kusura: copper, lead, iron, and gold. Copper is common, and not unknown even in period A. Lead occurs occasionally, and the 1937 excavations show that it came into use as early as the period transitional between B and C.[1] Iron, even in C, is rare; gold rarer still, for only one piece was discovered (1935). The objects analysed in 1936 proved to be copper, true bronze being absent; see *Archaeologia*, lxxxvi, 39, 64. A piece of slag, from V 96·1 m., has not yet been examined, but is interesting as a proof of local activity.

To the types acquired in 1935 and 1936 we may now add large round-headed pins like fig. 21, no. 22; several long drills, punches, and chisels; the spear-head, no. 1; the ear-ring, no. 12; the double ring, no. 14; and the lead bead, no. 15. Many of the finds, however, repeat those illustrated and discussed in *op. cit.*, 39 ff., to which the reader can refer: in such cases, their distribution is the important factor; this I have summarized as briefly as possible, with a letter for the stratum, and a number to show how many examples were found there, so that C, 2 = period C, two examples. Contrast and compare the results obtained in 1935 and 1936.

The following account is indebted to Miss N. Six for elucidation of certain technical details, and points in connexion with the manufacture and use of the tools.

Needles and Pins.

For the needles, see *op. cit.*, 40, fig. 18, no. 2. Transitional, 1; early C, 4; late C, 8; unstratified, 2. A few of the needles from C have the eye carelessly made by bending down one end of the copper wire from which the implement was formed, e.g. fig. 21, no. 17. Needles were also used in periods A and B; see *op. cit.*, 39.

Pins with thick, quadrangular heads, fig. 21, no. 19: cf. *op. cit.*, 40, fig. 18, no. 4. Late B, 1; transitional, 1; early C, 1; late C, 1.

Pin with pear-shaped or oval head: cf. *op. cit.*, *loc. cit.*, no. 5. C, 1.

Pins with round heads, as *op. cit.*, *loc. cit.*, no. 6. Late C, 3. There are also two pins of this type, both from period C, with very large heads, nos. 20 and 22 in fig. 21.

Pins with heads angular in profile, round in horizontal section, as *op. cit.*, *loc. cit.*, no. 7. Transitional, 1; transitional or early C, 1; early C, 2; late C, 3. One of the transitional pins is a variant with an unusually flat head. No. 21 in fig. 21 is a larger version of the same form, from period C, late.

Pins with heads angular in profile, square in horizontal section. One, from the surface earth, resembles *op. cit.*, *loc. cit.*, no. 9: the other, no. 23 in fig. 21, is decorated with rings below the head and comes from the middle strata of period B.

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[1] At Alişar, it appears earlier: see *O.I.P.*, xxviii, 198, for its use in Alişar I.

Roll-headed pins, as *op. cit.*, *loc. cit.*, nos. 12, 13. Transitional, 1; early C, 2; late C, 2; and one possible example, also from the late C period. This limited distribution must, in view of previous finds, be considered accidental.

Double roll-headed pin. Fig. 21, no. 24, from the transitional period.

Drills.

Small drills are very numerous. B, middle strata, 1; late B, 1; transitional, 3; early C, 7; surface earth, 2. See fig. 21, nos. 2 and 3; compare *op. cit.*, *loc. cit.*, nos. 21–25 and 27.

Nearly all the drills are square in section except near the tip, and much used: the points have been blunted, and sometimes one or both ends are broken. Two drills, however, are square in section almost as far as the tip, and seem to be quite unworn. It is probable that all specimens were hafted, and made to turn by the rubbing of the hands or the rotation of a bow. Some idea of the appearance of the finished article may be obtained from the iron awls with bone handles excavated at Tarsus.[1]

Large drills.

Five specimens were identified, four of which widen at the place where the haft ends; one not only widens but is also grooved to give the haft additional security. The point may be long or short.

Fig. 21, no. 5, from the surface earth, has a long point: so too a drill not illustrated, from the early C period. Fig. 21, no. 4, grooved and long-pointed, belongs to the late strata of C. No. 6, with its short point, must have been stronger and easier to use. It comes from 99·25–99 m. in pit XII, a stratum which is either late transitional or early C.

The only long drill with straight sides is no. 18, found with late C pottery in pit XII.

Punches and Chisels.

Fig. 21, no. 7. Punch with tapering end for haft. From V, 95–94·8 m. Transitional. Another punch, not illustrated, resembles no. 7 except that the blade spreads and the upper end is broken. Period C, late. With no. 7, compare *BK.K.*, pl. 13, no. 8.

Fig. 21, no. 8. Small chisel or punch, poor in quality and much worn. From X, 101–100·7 m. Period C.

Fig. 21, no. 10. Chisel. The top shows no signs of being hammered, and the tool was probably hafted, for otherwise it would have been too short for convenience. The blade is still fairly sharp. From VIII, 100·5–100·15 m. Period C.

Fig. 21, no. 11. Part of a chisel. The end has, apparently, been cut off, and the blade is worn. From VIII, 100·5–100·4 m. Period C.

Weapons.

Fig. 21, no. 1. Spear-head with solid point and hollow socket. Below the socket, the weapon first contracts, then widens. From XII, 100–99·75 m., which should be early C. A spear-head from Alişar II shows the same form and construction (*O.I.P.*, xxix, fig. 291, *d* 2964).

Fig. 21, no. 9. Copper blade in poor preservation. Unstratified. Though neither

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[1] *A.J.A.*, xli, 277, 278, fig. 35.

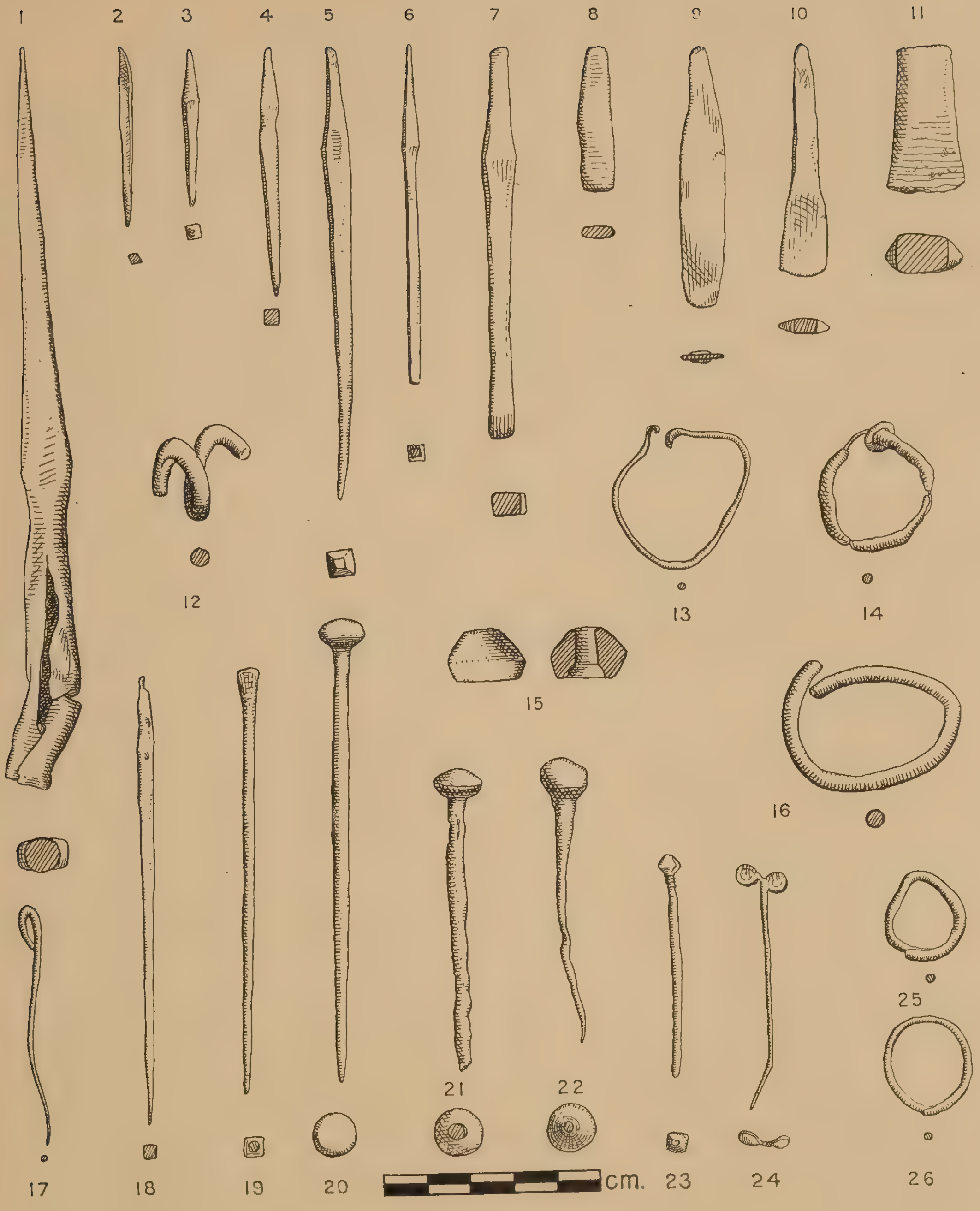
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Fig. 21. Metal objects

tip nor tang is emphasized, the general outline recalls that of the knife, no. 6 in fig. 19 of *Archaeologia*, lxxxvi, 42.

Rings and Bead.

Little copper rings, made of wire bent so that the ends meet or cross (fig. 21, nos. 13, 25, and 26), were only found in the C deposits during 1937, though the 1936 excavations show that such things were not unknown in period B. Only two lead rings appeared, one of which is late C, while the other, fig. 21, no. 16, belongs to the beginning of that period. More important is the discovery of a lump of lead in pit XII, at 98·20 m., a level which is assigned to the late transitional phase.

Fig. 21, no. 14, is a copper ring threaded through a smaller ring of lead. From period C, whether early or late is uncertain.

Fig. 21, no. 12, represents a copper ear-ring from the surface earth. The form, familiar from archaic Greek sites, is known as early as Troy II.[1]

Fig. 21, no. 15, another surface find, is a lead bead shaped like a spindle-whorl.

STONE

Flints.

The flints collected in 1937 (fig. 22, nos. 1–5) are like those found during the previous seasons. The most remarkable feature is the extraordinarily large proportion from period C. Though we did not remove more earth from the C deposits than from those of earlier date, the majority of our flints belong to the second millennium. The knives of class 1 *a* (*Archaeologia*, lxxxvi, 43), in yellowish white flint, are often remarkably large, one being as long as 0·14 m., and one 0·04 m. broad.

Once more we have to record the scarcity of cores, in spite of careful search. The lower levels of period C produced one obsidian core, period B another, and the flint core, fig. 22, no. 6, came from the C strata of pit XII.

Celts.

As before, these are scarcer than we should expect. To the three published in *Archaeologia*, lxxxvi, 45, only ten more can be added: B, 4; transitional, 1; C, 3; surface, 2.

Fig. 23, no. 1. Surface ground and polished near blade. Material,[2] black igneous rock. From V, 92·5–92·25 m. Period B.

Fig. 23, no. 2. Surface as no. 1. Material, dark grey igneous rock. From III, 101–100·75 m. Period C.

Fig. 23, no. 3. Ground, with slight polish near blade. Material, green igneous rock. From X, 100·5–100 m. Period C.

Fig. 23, no. 4. The blunt edge recalls *Thermi*, pl. L, 31.16, but is flatter, like that of a pounder. Perhaps the tool was used as such after its original blade had become worn. Material, green igneous rock. From V, room 7, 93·4–93·2 m. Period B.

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[1] Schliemann, *Ilios*, 489, no. 845; 497, nos. 878, 880.

[2] I hope to submit samples of the stone implements to a specialist in order to have the materials properly identified, and to obtain information as to their probable sources.

Fig. 23, no. 5. Wide butt and narrow blade. Surface ground. Material, grey igneous rock. From XII, 96·5–96·25 m. Transitional.

Fig. 23, no. 6. Miniature chisel. Highly polished, especially near blade; sharp cutting edge. Material, speckled green igneous rock. From V, 90·75–90·5 m. Period B.

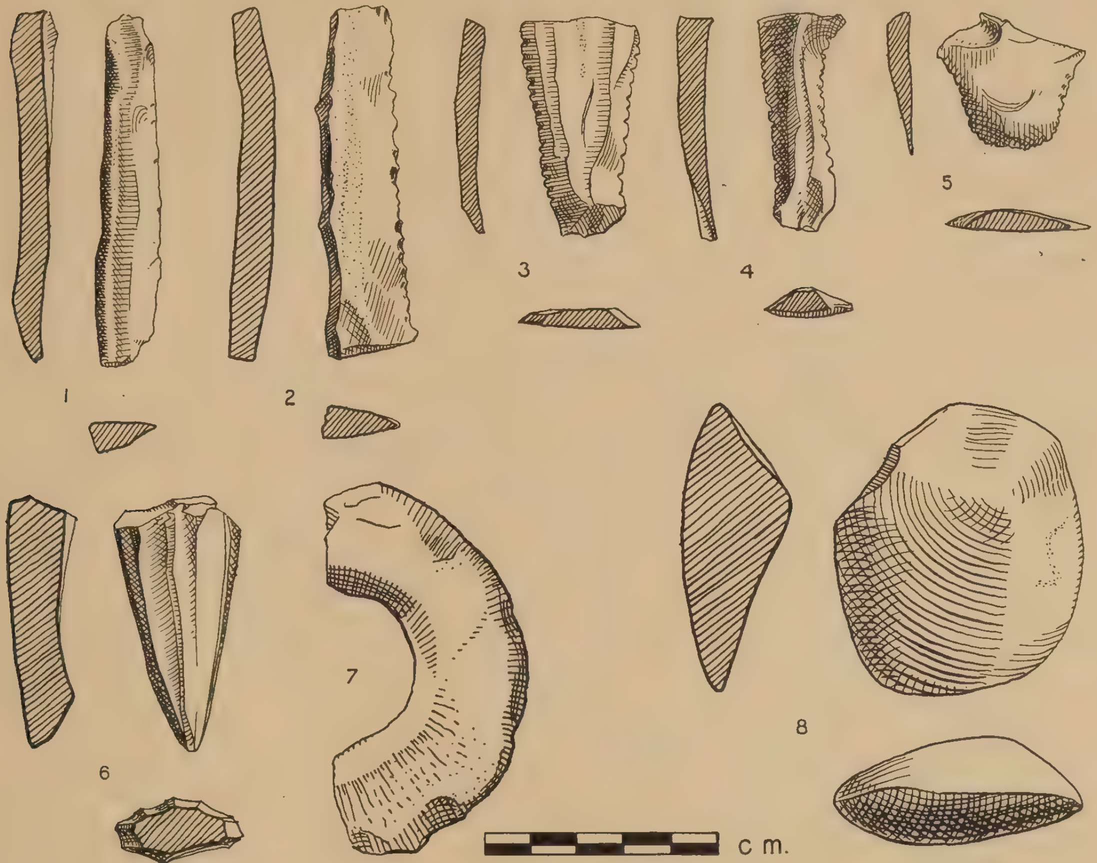

Fig. 22. Flint and stone implements; flint core

Fig. 23, no. 7. Surface ground, with polish by blade. Material, blue-black igneous rock. Unstratified.

Fig. 23, no. 8. Surface polished. Material, green igneous rock. From X, 102–101·5 m. Period C.

Fig. 23, no. 9. Surface polished; butt and blade chipped. Material, blue-green speckled igneous rock. From V, room 7, 92·6–92·4 m. Period B.

Bored axes.

These are all fragments: butts, blades, and one piece from the middle of an axe. When the butt is absent, the type is usually uncertain; when it is present, we can distinguish (*a*) axes with short butts, rounded or squared (fig. 24, nos. 1, 5, 6), and (*b*) axes with elongated butts, sometimes curved slightly downward (fig. 24, nos. 3, 4, 7), which

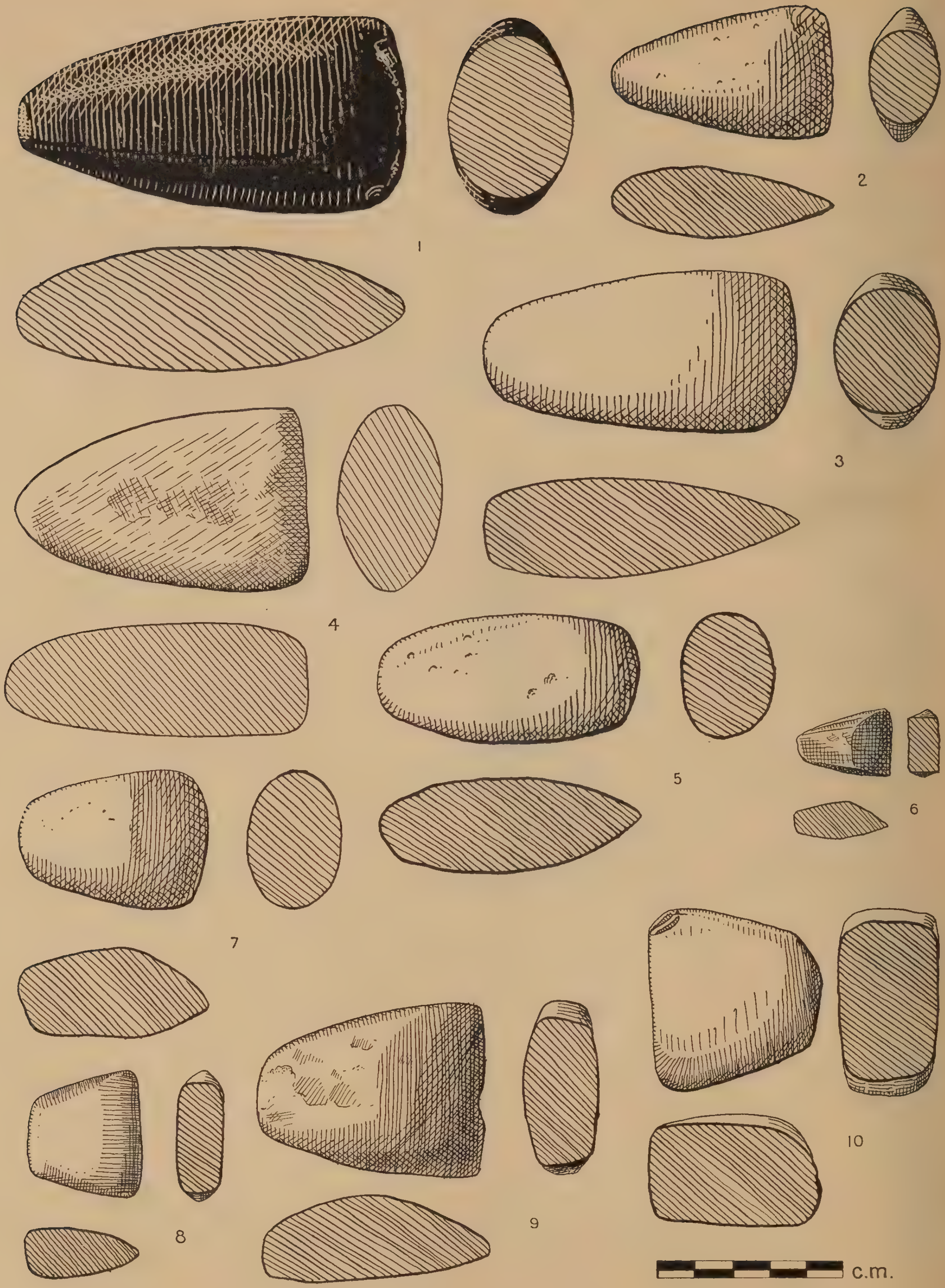
1
2
3
4
5
6
7
8
9
10
c.m.

Fig. 23. Stone celts and pounder

were not represented before 1937. As the characteristics of the two types are not clearly shown by the fragments, I will refer the reader to Wace and Thompson, *Prehistoric Thessaly*, fig. 111*f* for (*a*) and to *P.F.K.*, pl. XVIII, 13 for (*b*) elevation. In plan, our (*b*) specimens are, with one exception, comparatively narrow, without a pronounced swelling at either side of the hole.

Type (*a*). Eight fragments come from period B, three of these having a definitely squared butt; four come from one period C, and of those, one has a square and one a somewhat tapering butt, the rest being rounded. One fragment, from the surface of the mound, is interesting by reason of its large size. All the axes are ground rather than polished. At Alişar this type goes back to the chalcolithic period.[1]

Fig. 24, no. 1. Butt end. Hole bored from one side and partly polished. Material, green igneous rock. From the surface of the mound.

Fig. 24, no. 5. Butt end. Hole bored from both sides and unpolished. Material, green igneous rock. From V, street, V 93·8–93·6 m. Period B.

Fig. 24, no. 6. Butt end. Hole bored chiefly from one side and unpolished. Material, green igneous rock. From XII, 94·6-94·4 m. Period B.

Type *b*. B, 2; transitional, 1; transitional or early C, 1; C, 2. All fragments except fig. 24, no. 7, are ground but not polished.

Fig. 24, no. 3. Butt end, with the butt itself flattened. Hole bored from both sides and unpolished. Material, black igneous rock. From XII, 98·5–98·1 m. Late transitional or early C period.

Fig. 24, no. 4. Butt end. Hole partially bored. Material, grey-green igneous rock. From XII, 97·3–97 m. Transitional.

Fig. 24, no. 7. Butt end, flattened like no. 3. Hole bored from one side and unpolished. Surface of axe slightly polished. Material, green igneous rock. From III, 100–99·75 m. Period C. Compare *O.I.P.*, xxix, fig. 260, *c* 1039.

Blades. A few were found in the C deposits or on the surface of the mound. Fig. 24, no. 2 is the best: its downward curve suggests that it belongs to type *b*. Hole bored from both sides and unpolished. Material, greyish igneous rock. Unstratified.

Mace-heads.

One truly handsome and distinguished mace-head, fig. 25, no. 1, stands out from the rest of our stone tools; yet the others, though for the most part fragmentary, include better material than that which prompted the disparaging description given in *Archaeologia*, lxxxvi, 47. The three with angular profiles like fig. 25, no. 3 are well finished and all of green igneous rock (B, 2; early C, 1). Six have rounded profiles like fig. 25, no. 1. With the exception of no. 1, they are of greenish or greyish igneous rock and vary in quality, some being more symmetrical, some slightly polished, some rather rough (B, 5; late C, 1). Intermediate between the angular and the rounded types are six more pieces (like fig. 25, no. 2), of green, grey or black rock (B, 2; transitional, 1; C, 2; unstratified, 1). One unusually flat mace-head comes from a late stratum of C (fig. 25, no. 6). Holes may be bored from one side or from both. These weapons, like the bored axes, were used as early as the chalcolithic period at Alişar.[2]

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[1] *O.I.P.*, xxviii, fig. 90. For the squared butt see *op. cit.*, *loc. cit.*, *e* 1328.

[2] *O.I.P.*, xxviii, 82.

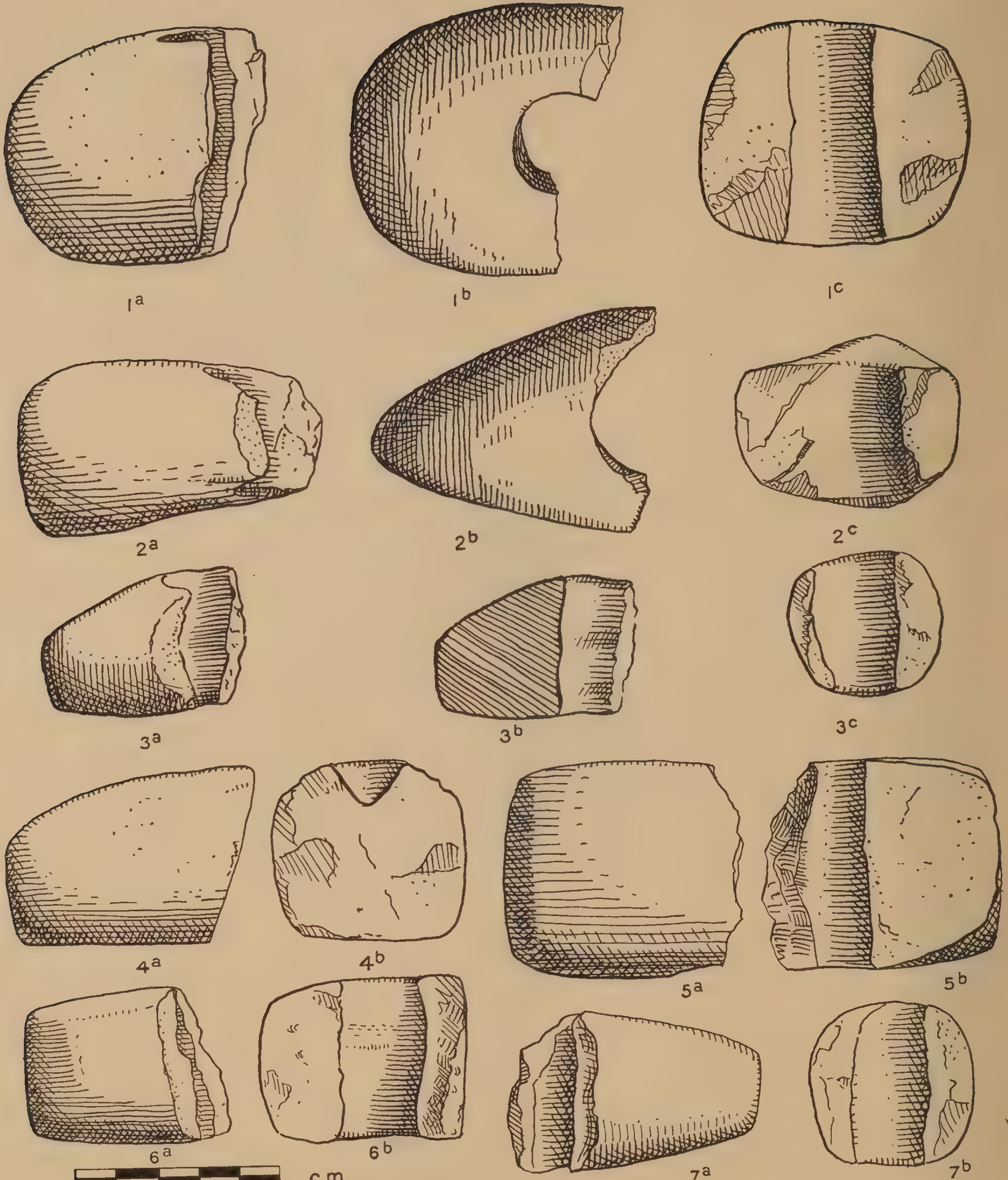
1a
1b
1c
2a
2b
2c
3a
3b
3c
4a
4b
5a
5b
6a
6b
7a
7b
cm

Fig. 24. Stone axes

Fig. 25, no. 1. A beautiful specimen with a fine surface. The hole is bored from one side only. The material, green igneous rock, speckled brown and white, is otherwise unknown at Kusura. From V, room 7, 92·65–92·6 m. Period B.

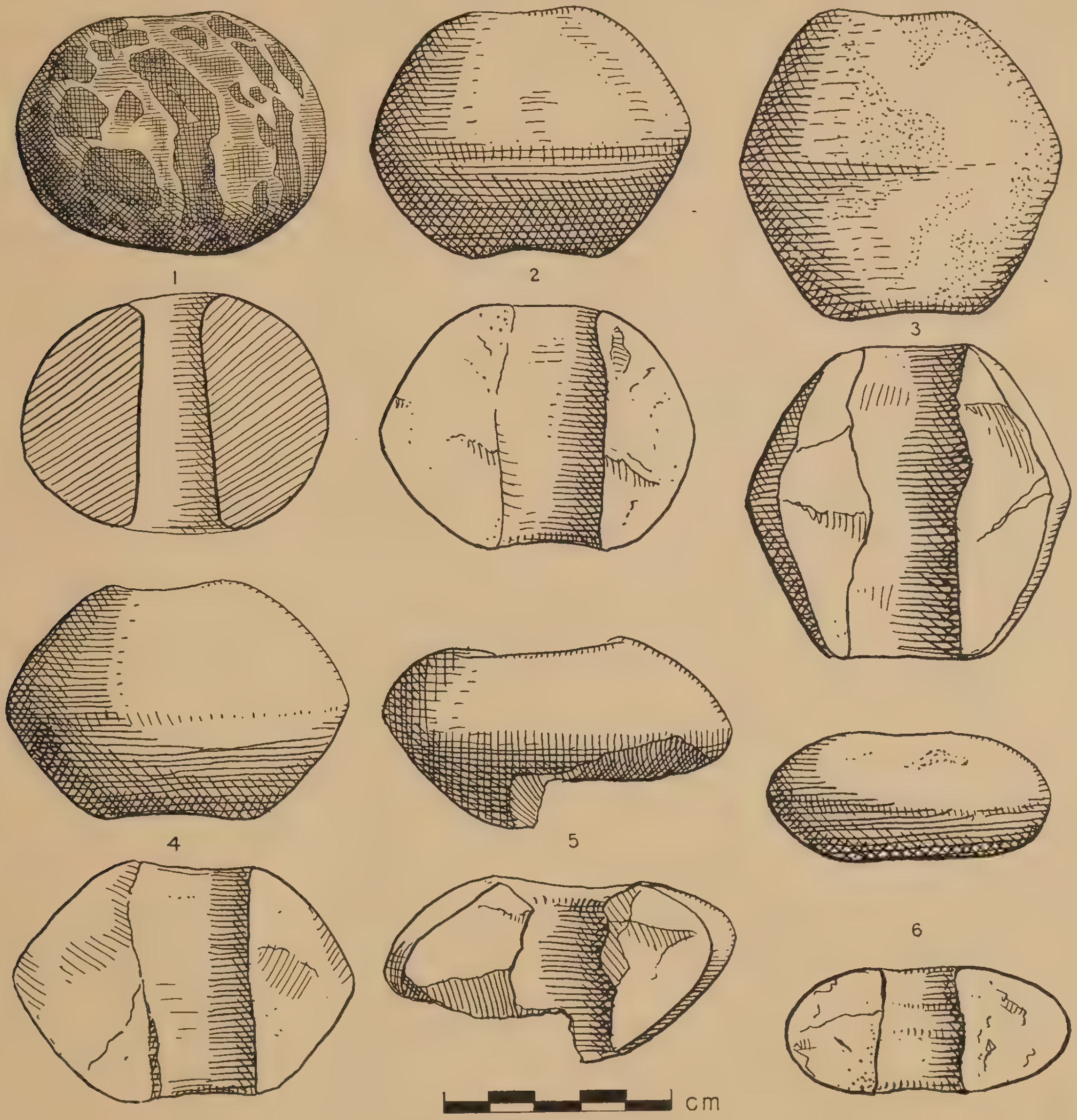

Fig. 25. Stone mace-heads

Fig. 25, no. 2. Hole bored from one side and unpolished. Material, light green igneous rock. From X, 100–99·5 m. Period C.

Fig. 25, no. 3. Hole bored from one side and unpolished. Material, green igneous rock. From V, room 5, 93·2–93 m. Period B.

Fig. 25, no. 4. Method of boring uncertain; hole unpolished. Material, green igneous rock. From XI, 92·75–92·5 m. Period B.

Fig. 25, no. 5. The hole seems to have been bored from both sides and unpolished. Material, grey rock with white grains. From V, room 3, 93·2 m. Period B.

Fig. 25, no. 6. The hole, unpolished, was bored from both sides. Material, green igneous rock. From X, 100·75–100·25 m. Period C.

Sword-Pommels.

Fig. 26, no. 6 is half a sphere of white marble (?) with a cavity underneath wherein the tang of a sword or dagger would fit, and transverse borings for riveting. Through these, the pommel has been broken. From V, 97·25–97 m. Period C, early. See *Bogazköy, Neue Untersuchungen*, 30, for discussion of the double riveting and account of sword-pommels from other sources: compare *ibid.*, pl. 6, no. 11.

Fig. 26, no. 5, part of a second sword-pommel, has two perforations. One runs through it from the top downwards, and we must infer that the tang extended thus far, otherwise the second perforation, a rivet-hole from the side, would have been useless. In any case, the system is unusual, and it is possible that we have here a piece spoilt in the making. The form, contracting below the ridge which marks the widest diameter, may have been like that of *Bogazköy, Neue Untersuchungen*, pl. 6, no. 10, and *O.I.P.*, xxix, fig. 261, *d* 2876. Material, white marble. From XII, 103–102·76 m. Period C, late.

A third marble fragment, too broken for reconstruction but with a single rivet-hole, belongs to the same date as the last.

Hammers of Comparatively Soft Material.

Three were found, all with partial borings instead of holes. The earliest, of grey volcanic rock, from period B, is more or less oval with the rudimentary boring near one end. The latest, of the same material, from the earlier strata of period C, tapers slightly towards the point and has the depressions near the centre. Our third hammer, of heavy grey limestone (?), appears round when seen from above and is remarkable for a pair of cavities above and below with another pair at each side. Period B.

Pounders.

As noted in 1936, objects that can be identified as pounders are more common in period C than in B. Four are of igneous rock, e.g. fig. 23, no. 10, from period C, which has a high polish on the base. The rest are of softer materials and more or less conoid in form (cf. *Archaeologia*, lxxxvi, 49, fig. 23, nos. 1, 2), though there is a tendency for the bases to be quadrangular in section.

Idols.

Our six idols[1] illustrate the various modifications to which the flat, simple form was subjected. Fig. 17, no. 5, the earliest, has eyes and eyebrows; two, fig. 17, nos. 1 and 2, are very small; one, pl. LXXXIV, 11, is exceptionally large, being 0·28 m. high; fig. 17, no. 4 probably had the same outline as pl. LXXXIV, 11, though it is not so thin; while fig. 17, no. 3 may have been more or less like no. 2.

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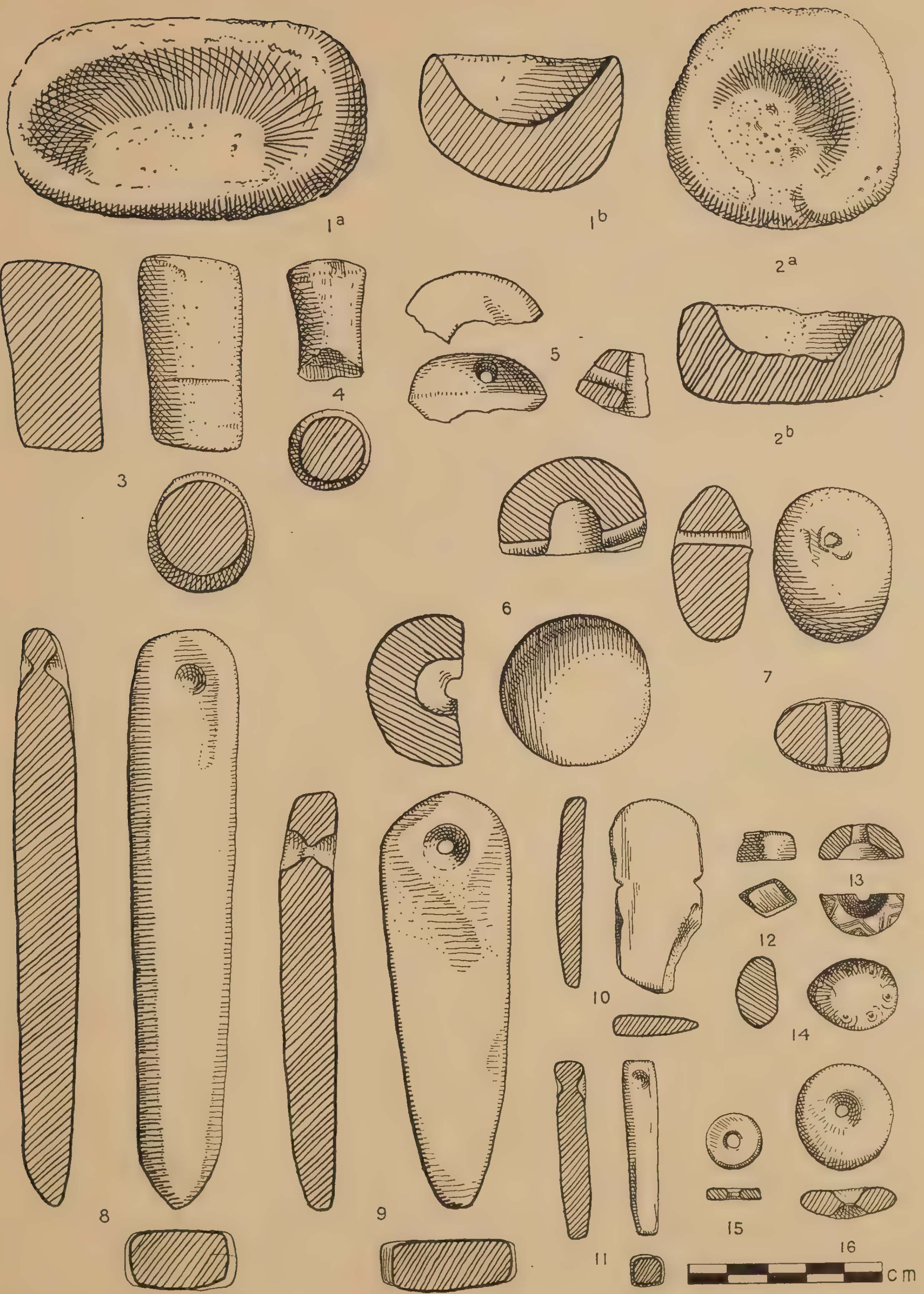
[1] There are four fragments that may belong to other idols, but do not deserve description.


1a
1b
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13
14
15
16
cm

Fig. 26. Stone objects, various

In eastern Anatolia, stone idols appear to be less common, less well made, and, with the exception of the exotic figures from Kültepe, less developed than in the west: Kusura is in this, as in many other respects, western, and supports Bittel's theory of a centre of diffusion in the Cyclades.[1] At Thermi,[2] terracotta begins to replace stone for statuettes early in the third millennium; at Kusura, on the other hand, stone images are still found in the deposits of the Hittite period.

Pl. LXXXIV, 11. Large idol, very thin in section. One corner restored. Material, white marble. Ht., 0·28 m. From XII, 95·8–95·6 m. This stratum appears to belong to the early transitional period.

Fig. 17, no. 1. Miniature idol in white marble. From XII, 97·3–97 m. Transitional.

Fig. 17, no. 2. Upper part of white marble idol, the break much worn. From X, 98·75–98·5 m. Period C.

Fig. 17, no. 3. Head of white marble idol. From X, 101·3–101·25 m. Period C.

Fig. 17, no. 4. Head of white marble idol. From V, room 7, 93·2 m. Period B.

Fig. 17, no. 5. Complete idol, with hollow eyes, incised eyebrows and line on body. Very thin in section. Material, white marble. From V, 90·75 m. Period B, early.

Seals.

The stamp-seals, fig. 18, nos. 2 and 4, deserve little comment beyond a reference to the terracotta ones on the same figure,[3] and a note on the absence of counterparts in metal.

Fig. 18, no. 2. Material, white stone covered intentionally or otherwise with a yellow substance. From X, 100·8–100·7 m. Period C.

Fig. 18, no. 4. Material, as no. 2. From XI, room 8, 93 m. Period B.

'Pendants' and 'Whetstones'.

Stones like fig. 26, no. 9 and some of those illustrated in *Archaeologia*, lxxxvi, 31, fig. 12 form a distinct group. Unsatisfactory names have been given to it and indecisive explanations proposed. For its distribution in Anatolia, Macedonia, and Lesbos, see *op. cit.*, 50, 51, and *Thermi*, 192–3.

At Kusura these stones may be large or small, thick or thin, oblong or tapering, with holes bored either from one side or from both. Smooth materials are always used, such as greenish limestone. Three come from B, one from the early strata of C, and one from the surface earth. Closely allied is fig. 26, no. 11, square in section and only partially bored.

Unpierced stones, roughly oblong, slightly larger than the pendants but of similar material, have a better claim to be called whetstones, especially as they are rare in the Early Bronze Age, when metal was particularly scarce.

Fig. 26, no. 8. 'Whetstone' with unfinished hole bored from both sides. Material, limestone (?). From V, 98·75–97·25 m., in wall of trench.

Fig. 26, no. 9. 'Whetstone', bored from both sides, of smooth grey-green limestone. From the surface earth of area V.

Fig. 26, no. 11. Angular implement, incompletely bored, of smooth-textured but uncertain material. From XI, 97·5–97·25 m. Period C, early.

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[1] *P.F.K.*, 37.

[2] *Thermi*, 149, 177.

[3] See also *Archaeologia*, lxxxvi, 31, fig. 12.

Conical 'Pawns' or 'Counters'.

See *Archaeologia*, lxxxvi, 31, fig. 12, no. 15 for illustration; *ibid.*, 51 for description. Many such objects were found in 1937, none however below 92·5 m. Two have depressions on the base (cf. *Thermi*, 195), and these come from period C, early.

Cylindrical Spools and 'Pestles'.

Curious little spools of veined rock or marble are a product of Early Bronze Age sites in mainland Greece, the Cyclades, and Lesbos.[1] Their function is unknown, but they were obviously intended to be decorative as well as useful. Kusura has now yielded two halves of similar spools, one, fig. 26, no. 4, of a red and grey banded stone from the period transitional between B and C, one of white marble belonging to the early C period.

A white limestone (?) cylinder, fig. 26, no. 3, may have served the same purpose as the smaller 'counters' in stone, terracotta, and bone found in previous seasons.[2] From III, 100·25–100 m. Period C.

Discs, Spindle-whorls, and Beads.

Fig. 26, nos. 15 and 16 are two pierced discs, one grey, one of white marble, both from the late period of the settlement. To the same date belong three stones in the form of spindle-whorls,[3] very like no. 5 in fig. 23 of *Archaeologia*, lxxxvi, 49. A similar object, incompletely bored, was found in the low strata of period B. Fig. 26, no. 13, from the surface earth, is either a bead or a small whorl; for both the shape and the incised pattern are known from the terracotta whorls, which its dark colour and polished surface imitate. One small bead of polished blue-black igneous rock, like *op. cit.*, 31, fig. 12, no. 3, lay in the transitional B–C deposits.

Rings.

The broken ring, fig. 22, no. 7, appears to be of marble, roughly chipped at the edge. From XII, 100·7–100·5 m. Period C. I cannot guess its function, and know of only one parallel, a ring belonging to the Phrygian period at Alişar.[4] A white marble fragment from our B deposits was once part of a much smaller ring with a wide central hole bevelled at the edges.

Vessels and Receptacles.

Three little vessels and the fragments of two more were discovered. The most primitive was made by grinding a hollow on one side of an oval stone, a practice paralleled on many early sites; the remaining four have been worked on the outside as well as on the inside. A volcanic rock appears to have been used in every case (B, 2; C, 3).

Fig. 26, no. 1. Shallow dish. From X, 100·5–100 m. Period C.

Fig. 26, no. 2. Possibly a crucible, for there are traces of a black substance inside. From XII, 99·75–99·5 m. Transitional or early C.

The upper levels of C produced the leg of a bowl not unlike 11 on pl. VI of *Archaeologia*, lxxxvi, but nearer to one bought in the modern village and now in the Afyon

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[1] References, *Thermi*, 195.

[2] *Archaeologia*, lxxxvi, 31, fig. 12, nos. 12–14.

[3] Compare the stone whorls from Alişar, *O.I.P.*, xxviii, 185, 269; xxix, 230.

[4] *O.I.P.*, xxix, fig. 481, *e* 1382.

Museum, with legs not only higher but also better finished. At Alişar, such bowls are Phrygian;[1] at Kusura they should, perhaps, be numbered among those late elements from which we infer 'that the town survived, though not for long, after the beginning of the Iron Age'.[2]

Miscellaneous, fine.

Fig. 26, no. 12 is a lozenge-shaped piece of greenish black igneous rock: we also have a larger, thicker lozenge of red stone, polished at the sides. Both are from period C, but recall small polished stones of varying shapes which were made at Alişar during the third and second millennia.[3] Fig. 26, no. 14, fashioned out of a polished whitish pebble, is unique. It can scarcely be a seal, for the punctured and incised patterns would leave but little impression; perhaps it is a charm. Period C, late. A pierced oval of volcanic rock, fig. 26, no. 7, from period C, may have been used as a weight of some sort. Fig. 26, no. 10, from C, awaits explanation: some may call it an idol, some an implement, and some defer judgement.

Miscellaneous, coarse.

Fig. 22, no. 8, is a flat implement, perhaps used for agriculture. The surface has not been worked over; the material looks like limestone. From V, 91·75–91·5 m. Period B, early. Weights like *Thermi*, fig. 58, are not unknown. Querns like *op. cit.*, pl. xxviii, 4, have at last been found in period B as well as in C.

Bone

Only thirty-five bone implements were complete enough to be catalogued; nor were there many fragmentary specimens. Evidently the material was not much in favour. It will soon, I hope, be possible to get the bones identified with a view to finding from what animals they came.

The types, as before, are not very clearly defined: the long, pointed tools in particular showed so many variations that I decided to abandon the system of numbers adopted last year, though I have quoted it for reference. The tools in question I now venture to call 'awls', as the name is usually applied to them. There is one notable addition to our collection: the large, hammer-like object, no. 3 in fig. 28. Regarded at first with suspicion, it proved to be perfectly genuine, for it matches a similar find from Alişar III, a cultural stage which began in the last centuries of the third millennium.

Awls. Fig. 27, nos. 12, 16 (Types 1, 7 in *Archaeologia*, lxxxvi, 52). Some of these have a handle made of the joint of the bone: the shaft may be round and hollow or split. B, 3; C, 1. To the parallels mentioned in the previous report, add *O.I.P.*, xxviii, fig. 93.

Splinters of bone with one end pointed, more or less like *Archaeologia, loc. cit.*, type 2. B, 2; C, 2.

Blades, flattish (Type 4). B, 2.

Blade with very sharp point. Fig. 27, no. 2. From C. Compare *Thermi*, 198–9, type 5; *O.I.P.*, xxviii, fig. 193, *e* 473, *e* 592; xxix, fig. 265, *d* 2107.

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[1] *O.I.P.*, xxix, 427. [2] *Archaeologia*, lxxxvi, 4. [3] *O.I.P.*, xix, 66, 67, 172, 210.

Thick, pointed implements. Fig. 27, nos. 3–6, 10, 14 (Types 5, 6). These may be square at the handle end like no. 5, or trimmed, possibly for mounting, like no. 6. The sharpness of the point varies. B, 6; C, 2. Compare *O.I.P.*, xxix, fig. 269, *c* 875, *e* 940, *e* 1048.

Pins (Types 8, 9). Fig. 27, no. 8, from the transitional strata, may be a large pin.

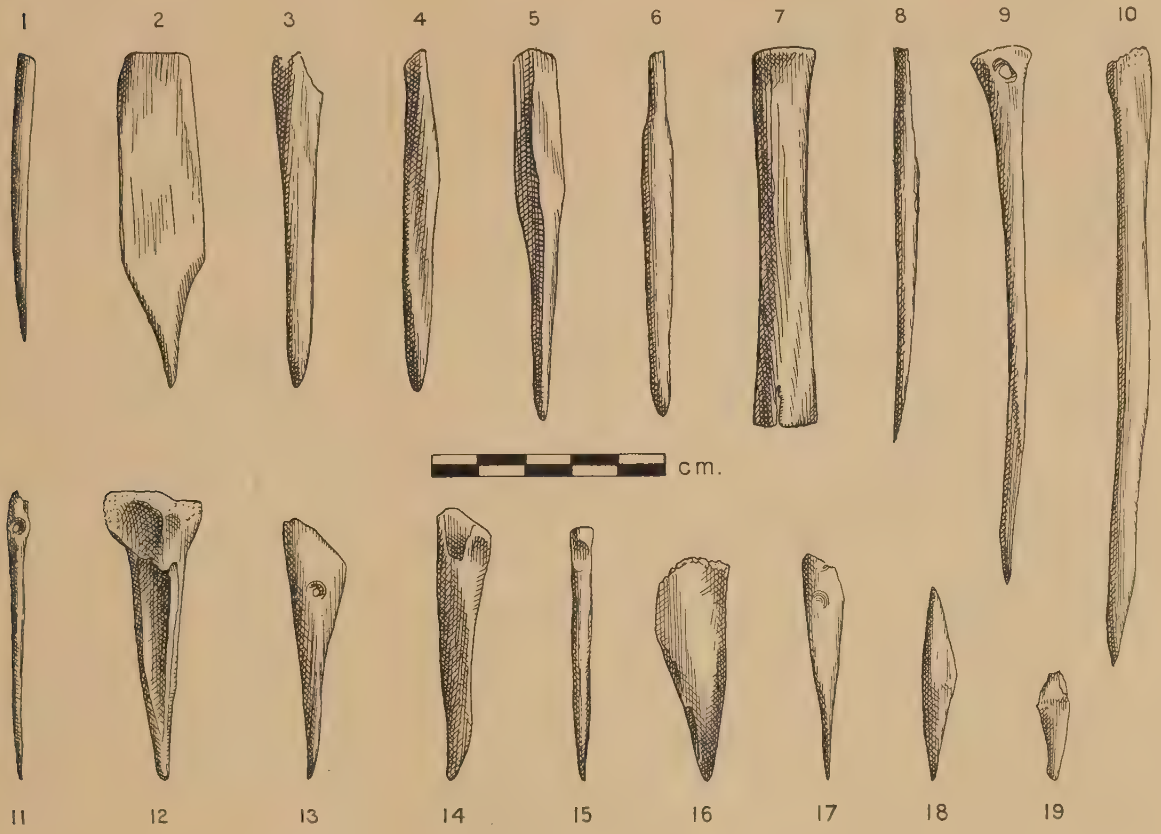

Fig. 27. Bone implements

No. 15, with a notch at one end, comes from C, early; no. 1 from B. About eight fragments were found in various deposits of period C.

Needles. Fig. 27, nos. 9, 11 (Type 10). No. 9 is from C, no. 11 from B. With the former, compare *O.I.P.*, xxviii, fig. 94, *c* 1837, *e* 1944; fig. 194, *d* 2148. No. 11 may be a toggle-pin.

Implements for threading. Fig. 27, nos. 13, 17 (allied to type 11). No. 17 is not pierced, but the beginnings of two holes are visible. B, 2.

Single and double-ended 'drills'. Fig. 27, no. 18, and possibly no. 19 (Types 12, 13). No. 19 is from B, no. 18 is transitional. These and no. 27 in fig. 24 of *Archaeologia*, lxxxvi, 53 are very like some of the so-called arrow-heads from the Hittite period at Alişar, *O.I.P.*, xxix, fig. 270. One feels that these blunt and brittle objects would be equally unsatisfactory as tools or weapons.

Tubes, long. Fig. 27, no. 7 (Type 15). This one is transitional; there are two others, one from B, one from C. References to parallels for these much-discussed utensils, *Archaeologia*, lxxxvi, 54, *Thermi*, 200; add *O.I.P.*, xxix, fig. 273 (Alişar II) and xxviii, 193, (earlier examples).

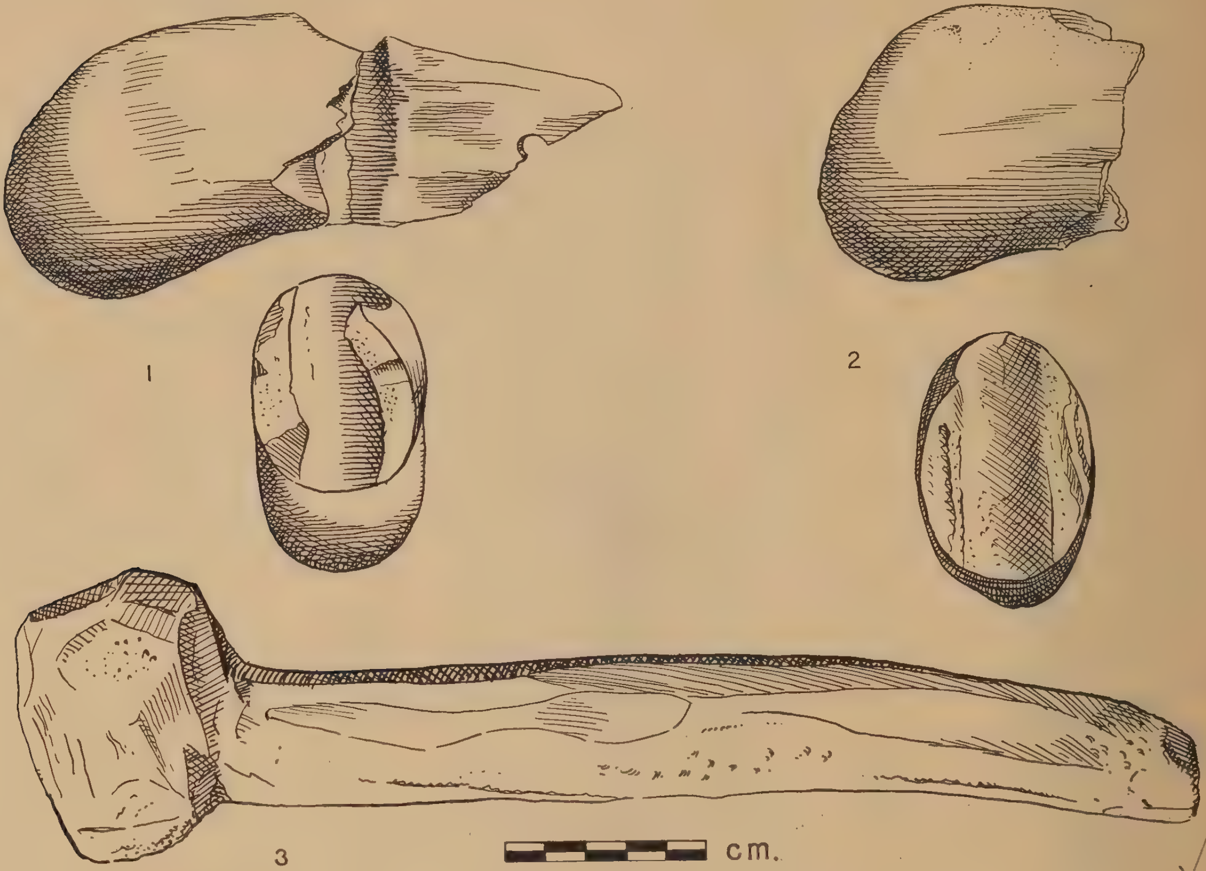

Fig. 28. Bone hammers and hammer-like implement

Tube, short (Type 16). C, 1.

Trimmed goats' horns (Type 17). C, 1.

Hammers, possibly for crushing corn. Fig. 28, nos. 1, 2. B, 2. Compare *Thermi*, type 16, and the Thessalian counterparts quoted in connexion with it; also *O.I.P.*, xxviii, fig. 94, *e* 1992. Contrast *Archaeologia*, lxxxvi, type 19.

Pierced stag's horn, from B, late. Compare *O.I.P.*, xxix, 243 and fig. 278, *e* 10, *e* 1926.

Fig. 28, no. 3 is made of a single bone, carefully trimmed and very heavy. From XII, 95·75–95·5 m. At 95·5 m., B wares occurred; above 95·75 m., the pottery is chiefly transitional but includes B wares; but between 95·75 and 95·5 m. there were hardly any sherds. For the type see *O.I.P.*, xxviii, fig. 272, *e* 2307, from Alişar III: it is called a cotter-pin. The workmen believed our specimen to be a pin for a cart: it feels like a weapon, but the bone from Alişar, rather shorter, and smaller in the head, does not.

GLASS

Two beads resemble the single one found last year. Both are greenish white, and have become opaque: the first is from period C, the second was found on the dump. See *Archaeologia*, lxxxvi, 54, where references to the use of this material will be found.

CONCLUSION

The combined results of three seasons' work at Kusura have shown the settlement to be a provincial town, mainly dependent on local resources but in touch with its eastern and western neighbours. The earliest settlers arrived at a time when the use of metal was already known, probably near the beginning of the third millennium: their origin is obscure, but on p. 237 I have tried to weigh the eastern elements in their culture against the western. The next period is marked by an intensive building activity, consequent on an increase in the population which may conceivably have been reinforced by immigrants from the west. Certainly the pottery indicates close relations with that part of Anatolia (p. 236), though, for smaller objects in terracotta and stone, numerous parallels have been supplied from eastern sources.

After a disturbed interlude at the close of the third millennium, the town, slightly diminished in size, was occupied by a people whose civilization can be compared with that of certain prominent Hittite centres. It was only natural that Kusura, while preserving its national character, should, in time, have come within the sphere of Hittite influence.

Some day, perhaps, historical evidence will come to light that will explain the archaeological data more fully. At present there is only one Hittite record which can be considered in connexion with our site: the account of the 'Misdeed of Madduwatta', whose rebellion included the district round Afyon Karahisar.[1] This rebellion, which took place in the second half of the thirteenth century, seems to have contributed to the final disintegration of the Hittite empire; we may speculate whether Kusura was involved but can find no trace of military activity which can be assigned to the period in question. Here, as in other matters, we must resign ourselves to the fact that it is notoriously difficult to reconcile historical documents with what has been unearthed by the spade.

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[1] Götze, *Mitteilungen der Vorderasiatisch-Ägyptischen Gesellschaft*, xxxii (1927) = *Hethitische Texte in Umschrift*, iii, 152–3.

VIII.—*Colne Priory, Essex, and the Burials of the Earls of Oxford*

By F. H. Fairweather, *Esq., O.B.E., M.D., F.S.A.*

Read 21st March 1935

The priory of Colne, situated in north Essex near the river of the same name, was one of the smaller priories, and would probably have been passed over in monastic histories with a brief notice, if it had not been, during its entire history, intimately associated with the family of De Vere, who for more than five centuries and a half held the earldom of Oxford. The De Veres founded it, endowed it, and save in a few exceptional cases were buried in its precincts during the whole period of its existence.

History of the priory. There is some evidence that an earlier monastery or college of priests existed in Colne in pre-Conquest days before the advent of the De Veres. This minster is mentioned in the will of Leofgifu about the year 1045.[1] It seems that this minster was most probably founded in the church dedicated to St. Andrew, at the Colne which was afterwards distinguished by the prefix of 'Earls', especially as nothing is more likely than that Alberic de Vere, the founder of the Norman priory, should select a place already the site of a religious foundation. Furthermore, the early references repeatedly refer to this dedication to St. Andrew, whereas the succeeding charters refer to the dedication to our Lady, Sancta Maria de Colum,[2] to which dedication was later added one to St. John the Evangelist, and this is finally employed at the end of the sixteenth century when the site passes for ever from the possession of the De Veres to that of the Harlackendens. Doubtless the new dedication to our Lady was introduced when the new Norman buildings were ready for consecration, while that to St. Andrew remained on the old site as that of the parish church of Colne, which it still is.

The foundation. The founder was Alberic de Vere, to which is usually added 'first of that name'. Confusion has constantly arisen with reference to the early De Veres as no less than four in succession, who were heads of the house, bore this same name. At the time of the foundation there were two Alberics, father and second son, commonly called 'Senior' and 'Junior'.

The founder made his new priory a cell to the abbey of Abingdon, under the following circumstances. Faritius, who became abbot of Abingdon in 1100, formerly a monk at Malmesbury, was an Italian, born at Arezzo, and highly skilled in medicine. Geoffrey de Vere, eldest son and heir of Alberic Senior, and elder brother of Alberic Junior, had suffered from a severe illness, and, under treatment by Abbot Faritius, had apparently recovered. In gratitude, with the consent of his father and family, he had granted to Abingdon the church of Kensington (still known as St. Mary Abbot's). He appears to have relapsed and died before Henry I's confirmation of the charter, as in that deed, drawn up before 1107, reference is made to Maurice, bishop of London,[1] the gift is spoken of as Alberic Senior's, for the soul of his *deceased* son Geoffrey, and the latter is stated to have been buried at Abingdon.[2] The Chronicle goes on: 'And because in Essex which is distant from Abingdon many miles' communication with Abingdon was difficult, Abbot Faritius and his monks agreeing, the elder Alberic and his wife, and Alberic Junior also approving, it was decided to found a monastery at Colne subordinate to Abingdon, and to place monks there. The king and Maurice, bishop of London, permitted this foundation, and Abingdon monks were installed. This fixes the foundation as between 1100 when Faritius was translated to Abingdon, and 1107 when Bishop Maurice died.

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[1] See Thorpe, *Dipl. Angl.*, 569 *et seq.*, and William Page, *Arch.*, lxvi, 84.

[2] See Charters 32 and 36, Rev. William Cole's Transcription B.M. Add. MSS. 5860.

The earliest existent charter, a grant by Alberic de Vere 'Camerarius', i.e. Junior, partially dated by the witness of Faritius of Abingdon, is in the first years of the twelfth century. By this and subsequent benefactions the priory became possessed of the parish church of Colne dedicated to St. Andrew, and much other property.

Provision was made in the first arrangement for six monks, the number afterwards being raised to twelve, and at the Dissolution consisting of a prior and ten monks. This small number of religious, apparently consistent throughout the existence of the priory, demanded no great scale of buildings. The house was situated upon no great thoroughfare requiring increases of guest-house accommodation on a large scale, and no record appears of the possession of important relics demanding enlargement for the housing of pilgrims. With the exception of a slight increase at the east end of the presbytery, and the enlargement of a choir aisle on the south to form a Lady Chapel, the scale of the buildings seems to have been unaltered from the first building of the Norman church until the Dissolution, all alteration or rebuilding taking place within the original limits, which are those of a priory distinctly on a small scale.

Alberic Senior became a monk in the priory. His death followed not long afterwards, and apparently almost immediately that of his youngest son William. In 1148 was a consecration, recorded by Robert of Gloucester.[3] This probably marks the completion of the nave (cf. Castle Acre at the same date).

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[1] Maurice died in 1107.

[2] *Chron. Monast. Abingdon*, ii, 57.

[3] The anathema pronounced on this occasion is a classic, Dugdale, i, 188.

About 1189, temp. Richard I, appears the most active of the priors, by name William. He added several churches to the priory endowment, with tithes in other places, made the conduit and lavatory, shingled the church, built from the foundations a camera, described as the most beautiful in Essex (which was later burnt by carelessness), completed (that is, probably raised by a storey), the tower, 'as it is seen to-day' (i.e. *c.* 1189), built the chamber of the monks (probably the dorter), and contributed to the choir and infirmary. This most likely marks the substitution of permanent claustral buildings for more temporary ones, possibly of timber.

At the beginning of the fourteenth century the priory became restive with regard to its dependence upon Abingdon, and at a visitation in 1303, Archbishop Winchelsea started a reconstitution. This culminated in 1311 in an agreement between Richard, abbot of Abingdon, and John de Campeden, prior of Colne, which enacted that Colne might draw clerks to the monastery from any part of the country, no further Abingdon monks being sent to them, and those already resident might return to Abingdon within three years.[1] Colne was to choose its own priors, reasonably subject to Abingdon's approval. The patron, Robert de Vere (sixth earl), approved this, and Colne became a free priory.

In 1356-7 Colne Priory was in special trouble through the 'fall of the church'—most probably tower and crossing, damaging the central nave and choir. The king granted a short respite from taxation.[2] No details appear as to when repairs were completed, but it is to be noted that John, the seventh earl, died in 1360, and bequeathed 100 marks towards 'building the church'.

The Dissolution took place, among the lesser monasteries, in 1536. The inventory was taken by the king's commissioners on 10th June of that year, and the buildings and property were in the same year granted to John de Vere, the fifteenth earl of Oxford, as founder's kin and patron. The grant included 'The Priory or Monastery of the Blessed Virgin and St. John the Evangelist of Earls Colne', the whole church and bell tower of the priory and the 'Maner of Colne-Abby', and rectory, church or chapel of Earl's Colne, with its patronage and income, together with that of White Colne. 'So that from the time of this grant the Earls of Oxford again became possessors of the same Priory and of such lands in this parish as their ancestors had given to it.' . . .[3]

The inventory gives us a certain amount of information with regard to the buildings and furniture:

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[1] Abingdon would often recall such monks as were learned and send ignorant ones of their own, and lay the charges on the prior and convent, although they already had funds provided for this purpose (*Newcourt Rep.*, ii, 184).

[2] Close Rolls, see R. C. Fowler, F.S.A., in *Essex A.S. Trans.*, N.S., xii, 51.

[3] *Newcourt Rep.*, ii, 185.

In the church there is indication of six altars. In the 'Quyre' the high altar, and a second, probably the north choir aisle altar, each of which appears to have possessed an alabaster reredos. Hangings with the De Vere badges of mullets and garters, candlesticks, standards, and lectern of latten, with two pairs of organs and service books, seem to have constituted the furniture. Of 'Seynt Peters Chappell' the position is doubtful. It was probably one of the transept chapels, preferably the north, and will be mentioned again as the site of one of the interments. This altar possessed an old reredos of the Passion. The 'Chappell of our Lady', undoubtedly the enlarged south choir aisle, had similar furniture to that of the choir, and a reredos of wood with gilt images over the altar. The 'Roode Chappell', doubtless in the usual position at the east of the nave (here probably at the west of the second bay), had an alabaster reredos. Finally, the 'Redd Chappell' may have been the south transept chapel, or was possibly in the nave.

The 'Vestery' was on the south-west flank of the Lady Chapel, as the excavation showed, and contained a rich supply of copes and vestments with the De Vere arms and badges, flowers and birds, pomegranates and lions, and four cases for the altar linen, the whole valued at over thirty pounds. The inventory in the monastic buildings seems to be mainly confined to the area of the western range and possibly the refectory; the parlour, and hall are mentioned, both furnished with trestle tables and cupboards, and the former with a counter with leaves. A chamber over the parlour, with a servants' chamber next to it, and a chamber next the court (probably the outer court), with another servants' chamber adjacent, are all provided with bed furniture and are obviously sleeping apartments. Pantry and kitchen complete the list. No mention is made of the infirmary, guest hall, or any special apartments for the prior. Plate: the church and domestic plate together were valued at £43 18*s*. The church is described in the grant of subsequent conveyances as a stately building larger than the parish church, possessing a choir as in cathedral churches, with north and south aisles in nave and choir, having a belfry tower of flint and freestone containing five bells, and chapels dedicated to our Lady and to St. Peter.[1]

Morant's reference to the priory being a distinct manor introduces a second building which the De Veres had erected near the priory, and which is of importance in the history of the development. This building took the place of the original manor house of Earl's Colne known as Hall Place. Leland in his *Itinerary* says: 'A little beside Colne Priorie yn Estsax, wher the Erle of Oxford usid to be buried, was a manorplace of theirs, the dikes and the plotte wherof yet remayne, and berith the name of the Haulle Place. Syns the ruin of this manor place the Erles hath buildid hard by the priory.'

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[1] Holman, *c.* 1740.

Two books are referred to in connexion with the priory. The first, a cartulary, was in existence in 1745 when the Rev. W. Cole made a transcript which is amongst his manuscripts, finished in 1781. He says 106 charters in all, which are all included in the Cole MSS. (Brit. Mus. Add. MSS. 5860).

The second, quoted by Weever for several epitaphs, was of considerable interest. He refers to it as the 'Book of Colne Priory'. Turner terms it the 'Register of Colne Priory', and says it was in the possession of Anthony, earl of Kent (Grey, 1651–1702), and adds that it was in his time probably still in the library of the Marchioness de Grey at Wrest. On inquiring it appears that it is no longer there, and it is stated to have been either disposed of at a dispersal sale or to be possibly in the possession of Baroness Lucas.[1]

Cole gives the arms of the priory as 'Vere, with bordure counterchanged'.

The Site. The situation selected for the building of the priory lies on the right bank of the small river Colne about six miles as the crow flies below the De Vere family fortress of Castle Hedingham. The site is now a level meadow, divided into two parts by a ha-ha ditch with a right angle in it, the eastern limb of which was dug through the east portion of the presbytery of the monastic church. The river, on which was situated the priory mill, forms the eastern boundary of the area, while the western is formed by a small stream which doubtless formerly provided the monastery with a water supply. To the south of this area stands the present house known as the priory, a building of the early nineteenth century, replacing the earlier house of the De Veres, which occupied a position on the western side of the site, to south-west of the monastic church. The latter was situated to the north side of the area, and its eastern limit was within 30 yards of the river. The cloister was to the south of the church and the southern limb of the ha-ha ditch was cut through the eastern portion of it.

One single fragment of the buildings now rises above ground level, the base of the north-west tower of the church, which projected beyond the line of the aisle and formed the northern extremity of the west front of the building. A single stone at the edge of the ditch also reaches the surface in the eastern wall of the presbytery, and these two survivals mark the extreme limits of the monastic church, a distance of 197 ft. As the marked indications, visible in dry seasons, pointed to the possibility of recovering at least some portion of the plan of the buildings, by the kind permission of Col. Probert, F.S.A., the owner, and of Mrs. Heyworth who was then the tenant, excavation on a limited scale has been carried on at intervals since the autumn of 1929, with the result that, though destruction has been very thorough, and in parts complete, the main plans of church and chapter-house have been recovered (1934).

The plan of the church is that of the first Norman construction begun in the first years of the twelfth century, which was modified in the second half of the century by the addition of square ends to the three apses which originally terminated the presbytery, and in the fifteenth century by the removal of the narrow Norman south choir aisle for the construction of a Lady Chapel, which extended almost to the full width of the south transept, and lined at the east with the extreme east end of the presbytery (pl. LXXXV).

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[1] The writer would be grateful for information as to the existence of this book.

The Norman church consisted of a presbytery terminating in a central apse, with north and south aisles also terminating in apses, and consisting of two equal bays; west of this was the crossing with central tower, and a transept with an apsidal chapel to east of each limb; a nave of seven bays with north and south aisles, and a lateral tower, projecting entirely beyond the outer line of the aisles, flanking each end of the west front.

The plan is the normal Norman plan of the period with the exception of the last feature. This is an experiment, which must be one of the earliest, in the development of the western transept, which reaches its maximum in the great western transepts of Ely, of Peterborough before its later west front was added, and of Bury.

The form is by no means common in England. In addition to the examples above mentioned, it occurs in the west country at a later date at Wells, and in the eastern counties at West Acre and St. Botolph's, Colchester, both Augustinian houses. St. Botolph's, a neighbouring church, probably presented the greatest resemblance to the west front at Colne as its foundation date is practically the same, and the materials employed were similar. The attachment of the western range in both cases, and at West Acre, is managed in the same way, having regard to the projection into its area of the southern tower. The total length internally of the Norman church before alteration was 176 ft.

The Presbytery. The possibilities of study of the presbytery have been very seriously damaged. A ditch 20 ft. wide and originally some 6 to 7 ft. deep has been driven, at a slight diagonal, directly through the middle of it, destroying at the same time all foundations in the centre of the building and all monuments and graves which came within its area. In addition the Norman south aisle was very thoroughly eradicated at the time of the Lady Chapel extension, and by the digging of many graves in its area. Only the north side offers anything like a continuous area for exploration. The north wall of the aisle, constructed of flint rubble, though rough in many places, is present and traceable, with the tear-away of its eastern apse, the remainder of the latter being represented by its foundation trench, with a small amount of mortared Roman brick in parts, indicating the masonry beginning. This joins a small portion of the central apse foundation trench, which has barely been spared by the edge of the ditch. Their junction and the position of the original eastern respond of the arcade have been damaged by the changes consequent upon the addition of the squared east end, but the arcade is represented by a sound sleeper wall[1] with the base of a single pier, the latter showing a square of 4 ft., and dividing the space into two equal bays, having a span much larger than that of the nave bays. This sleeper and pier show good flint rubble work and the foundation trenches mentioned are of rammed flint and gravel. A rising step into the chapel marks the spring of the apse of the aisle. Another step 8 ft. 3 in. farther east marks the altar pace of the later extended end of the aisle.

The reconstruction of the presbytery from the portions thus recovered gives its proportions as 50 ft. long from east to west to the depth of the great apse, by 48 ft. wide over all, the aisles being 9 ft. 6 in. wide, and the lateral walls 3 ft. 6 in. thick. The later termination, built to provide square chapels in place of the apses in the second half of the twelfth century, stood to east of the structures already described, just giving working room outside the latter, and was doubtless constructed in great part before their destruction. The foundations of this are greatly superior to the earlier work, the mortar much more heavily limed and the walls more massive, those of the central portion being 6 ft. in thickness as against 4 ft. 6 in. in the thickest walls of the early build. The external angles of this central portion were recovered on each side of the ditch, the centre of course being destroyed. They consisted of well-built flint with some Roman brick, and with Roman brick quoins: at the interior angle on the north side the base of a shaft suggested that this new work was vaulted.[2] The new east wall of the aisle was 4 ft. 6 in. in thickness, and doubtless throughout the new work these massive foundations carried clasper buttresses at the angles, the walls being somewhat recessed.

The Lady Chapel. It has already been stated that the south choir aisle of the Norman church was destroyed in order to provide a new Lady Chapel. This work was almost certainly carried out in the fifteenth century. The outside of its eastern wall was carried out in line with that of the later end to the presbytery, and it was placed up against the latter with a straight joint, the raw upper surfaces of the two foundations being quite distinguishable from each other by a slight difference in colour. This new wall was thinner than that of the presbytery by 2 ft., being 4 ft. in width throughout the chapel, buttressed on the south side and with a cross buttress at the south-east angle. The west end of the southern wall impinged upon the wall of the transept apsidal chapel towards its outer side, and it seems possible that this chapel may have been left standing.[3] South of the western portion of the Lady Chapel, and continuous with the exit from the slype into the cemetery, a new vestry was added. This was doubtless a very necessary addition, judging from the list of vestments in the inventory. Its eastern limit was not excavated. The Lady Chapel walls were of flint with probably a good deal of clunch, as there is much chalky material about this area when digging.[1] An internal projection from the south wall in its eastern third may have been part of a monumental base.

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[1] *Vide infra.*

[2] The vaulting may, however, not have been added until the fourteenth-century repairs.

[3] Cf. Thetford.

From scanty remains dug up, the choir and chapels seem to have been floored with glazed tiles, without pattern.

In the attempt to find evidence of the termination of the older and narrower choir aisle within the limits of the later Lady Chapel many remains of interments were found, as noted by the graves on the plan. Two of these lay within the limits of the older aisle, the easternmost partly over the area of its east wall and therefore probably a burial during the period of the later Lady Chapel. The western grave was built with brick and tile and, from a flint structure on its southern side, seemed to have been connected with the early aisle wall and therefore to be dated previous to its destruction. It contained the undisturbed remains of a man of middle age[2] with perfect teeth and approximately 5 ft. 10-11 in. in height.

The contents of the grave, carefully examined by Col. Probert, yielded nothing but large coffin nails, yellowish fragments of wood, and smaller copper nails for fixing the coffin lining, which from a few shreds appeared to have been of velvet. The age of the remains would agree with that of John de Vere, seventh earl, born in 1313, who fell in front of Rheims in 1360, and was buried at Colne 'on the South Side of the Choir', apparently against a solid wall, as his wife willed to be buried in the 'upper arch' where her lord lay.

Outside the line of the early aisle wall lay another grave, probably an early interment outside the church, as its line appeared to have been governed by the sweep of the apse before the destruction of the latter. East of it was the base of a brick pier of the period of the Lady Chapel. It was east of this, and possibly associated with it, that the tomb of the thirteenth earl and his countess was placed 'Before the altar in the Lady Chapel'.

In addition to these, one large heap of bones, evidently collected from a number of destroyed graves and buried together, gave definite evidence of the remains of seven persons.

The Transept and Crossing. The foundations of the north and south transepts had been very badly damaged. On the north the west wall and part of the north, with their angle of junction, had almost entirely disappeared. The northern limb of the ditch had destroyed the structures at the junction of the crossing and south transept, and the southern limb of the ditch overlapped the south wall of the south transept in its western half. The remainder was able to be identified. The whole transept proved to be 88 ft. in length by 22 ft. in breadth internally, with walls 4 ft. 6 in. in thickness throughout, with a shallow buttress at the north-east angle, the only point left for investigating its buttressing. An apse with a radius of 6 ft. 6 in. occupied the eastern face of each limb. The northern arc was in poor condition, but could be traced through almost the whole of its curve, its junction with the choir-aisle wall being marked by a definite cut-stone foundation, matching the position of the usual flat buttress which was present on the outer flank. The southern apse had been almost entirely dug up on its inner face at the junction with the later Lady Chapel wall, but the outer face curving from the Lady Chapel junction to the transept angle was in excellent condition, built entirely of Roman brick with a flat Roman brick buttress at the Lady Chapel junction. The main transept walls were entirely of flint where exposed, but at a higher level doubtless had Roman brick courses.[1] Solid sleeper walls ran through the bases of the arches throughout the entire transept and crossing. In the search for the west wall of the north transept a thick foundation was found entirely constructed of Roman brick, at considerable depth, and much damaged by soakage. It was entirely off the transept lines, being inside its limits, and may have been part of the wreck of one of the buildings from which the Roman material was drawn.

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[1] Possibly from the vaulting.

[2] Dr. Griffith, who examined it.

The Nave. The nave is on the whole the most traceable portion of the church. The north side was associated with certain erections in the post-Suppression period, and it is probably due to its employment as a foundation for one of these that we owe the survival of its north wall in almost its entire extent. It is only destroyed at its transeptal attachment at its eastern end. At the west it joins the north-western tower, of which, as has been mentioned, a small portion survives. The south wall foundation is not in quite such good condition, but is quite traceable in its eastern two-thirds. At the west it disappears in a deep mass of brick rubble probably deposited in a levelling operation, to be spoken of presently, which was carried out about 1730. The foundations of the lateral nave walls were entirely of flint 3 ft. 6 in. in thickness, and at the junction with the tower on the north was a small square shaft, which suggested that shallow flat buttresses were carried upon this foundation thickness externally. No vaulting shafts were found, but it was evident that throughout the building every available fragment of cut stone or brick had been removed, and they may have existed. The arcades were carried upon a 4 ft. sleeper in the two eastern bays. This appeared to terminate at this point. Some of the tile flooring survived in the two western bays.

The positions of the second pier from the east and the three western ones were established. They were 4 ft. square, and had apparently been constructed of Roman brick with flint cores. The square may have changed to a column at a higher level, comparable to the design at St. Botolph's, Colchester; the respond from tower to aisle actually was a partial column originally. In the third bay from the east on the north side a foundation, finished in parts with cut stone, was exposed, some 7 ft. in length. It projected beyond the line of the arcade, and its position strongly suggests that it was the base of one of the monuments, and had a small chantry at this point.[1]

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[1] These are present in the fragments of wall in the north-west tower.

The finding of the entire crossing, the two bays of the choir, and the eastern nave bays occupied by a gridiron of sleeper-walls was rather a surprise, as such foundations are unusual in a Norman church of this date, size, and importance. Its disappearance in the western two-thirds of the nave distinctly suggests that it may be associated with the damage in 1356, as the area it occupies is exactly that which would require rebuilding if the central tower fell, and this sleeper may have been laid down for the reconstruction. This explanation would fit its position very well, and would also harmonize with the recasing farther west, which will be alluded to later. The central alley of the church was probably reconstructed entirely to a fourteenth-century design by partial rebuilding and recasing.

The nave arcade spaced out for seven bays, the easternmost slightly reduced in size. The width of the nave over all was 48 ft., of which the aisles occupied 9 ft. 6 in. each, and the arcades 4 ft. The southern wall showed a gap at its east end, next to the transept which represented the eastern processional doorway into the cloister. The wall was here thickened presumably to carry a recessed doorway, but no detail was found, and it is now only a rough mass of flint. A good deal of floor-tiling survives in broken condition attached to walls and piers. All that was observed was plain red tile and much worn.

The north-west tower stood completely beyond the line of the aisle, into which it opened probably by a plain semicircular arch springing from the wall itself, as no evidence is shown of a projecting respond. It presented an interior of 8 ft. by 9 ft., with walls 4 ft. 6 in. in thickness, with a diagonal cut off in its north-east angle, giving entrance to a newel stair with a radius of 3 ft. The walls were constructed of flint rubble with courses of Roman brick. The treads of the stairs, of which the two lower remain, were entirely laid in Roman brick, with a cut-stone newel post and base.

It is probable that this tower was retained after the Dissolution, possibly with a portion of the whole west front, for use as a beginning for outbuildings, as late brickwork walls start from its eastern and northern faces as shown in the plan. Time did not permit of the excavation of the corresponding tower on the south, but the eastern angle of junction with the aisle was found, and it most probably matched the plan on the north, with the western range to south of it as at St. Botolph's, Colchester, and at West Acre.

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[1] Here may have been the 'altar of Earl Richard' (eleventh earl) mentioned in the will of Sir George Vere 1500.

The nave seems to have remained unaltered in size throughout the priory's existence, though not in design, as there is definite evidence on the north side that a recasing took place about the third quarter of the fourteenth century.

The original Norman responds of the arch between the two western aisle bays, which had formerly consisted of wide segments of circles in Roman brick, had been recased in ashlar in that period, as had also the respond to west of the sixth bay of the nave, and doubtless the whole of the arcades had been similarly treated, following upon the rebuilding necessary after the fall of 1356.

The Monastic Buildings. Of the monastic buildings only the slype, the chapter-house, and the start of the walls of the dorter were excavated.

The slype, 9 ft. in width, between the south transept and chapter-house presented no special features. Its functions, however, must have been largely modified by the addition of the fifteenth-century vestry, outside its eastern end, which has already been described.

The chapter-house, of which the north-western angle has been entirely destroyed by the ditch, proved to be an apsidal building 44 ft. in length by 22 ft. wide, with massive flint walls 4 ft. in thickness, the face of the south-west angle showing Roman brick. In working inside the building, and in the beginning of the dorter, a thick layer of brick of all periods with broken tile from the roofs had to be dug through. The building had been squared, probably at the same date as that of the adding of the late twelfth-century end to the presbytery, by the building of a solid wall 4 ft. thick, with its western side upon the chord of the apse, to obtain the greatest length available. Externally foundations were added to the stumps of the destroyed apse for the purpose of carrying clasper buttresses, the whole of this work being carried out in flint.

The introduction of the slype here, between the transept and chapter-house, may be noted as a slight advance in planning. The usual arrangement in the eastern counties in the lesser monastic establishments places the chapter-house immediately next to the transept as at Castle Acre, Binham, and West Acre. This necessitated a passage in the subvault of the dorter for communication with the infirmary and monks' cemetery. Colne must have reverted to this older arrangement in the fifteenth century, when the vestry was added east of the slype.

The dorter. The start of the walls of the dorter subvault was exposed in dealing with the south wall of the chapter-house. They were 4 ft. 3 in. in thickness, and the range had an internal width of 22 ft. 6 in. They were not further excavated, but the drought of 1934 enabled the walls to be traced for another 60 ft., where the reredorter crossed their line, and could be laid out as far as is shown in the plan. No piers or cross walls were evident in the dorter subvault from the surface indications.

The cloister. The dimensions of this and of the southern and western ranges were able to be laid out in the same way, with the allowance of a very small margin of error. No clear signs of these buildings had been visible in the previous five years. The cloister was a square of 69 ft. In the southern range, with an internal width of 24 ft., the entry at its eastern end from cloister to outer court was destroyed by the ditch. We have no evidence whether the refectory was on the ground or upper floor, but the main chamber on the ground floor in the range was an apartment of 24 ft. by about 42 ft., to west of which was an oblong chamber in the position of the buttery screens. Level with this on the south, and projecting beyond the line of the range, was a building about 12 ft. by 14 ft. internally, possibly an additional kitchen. The original kitchen probably occupied the angle between the two ranges, and the early plan was completed by the western range to north of this, consisting of a large central chamber 35 ft. by 19 ft., with a smaller one to south of it, and to north the connexion with the south wall of the church and the southern tower of the west front, from which the west wall of the range was recessed back about 3 ft.

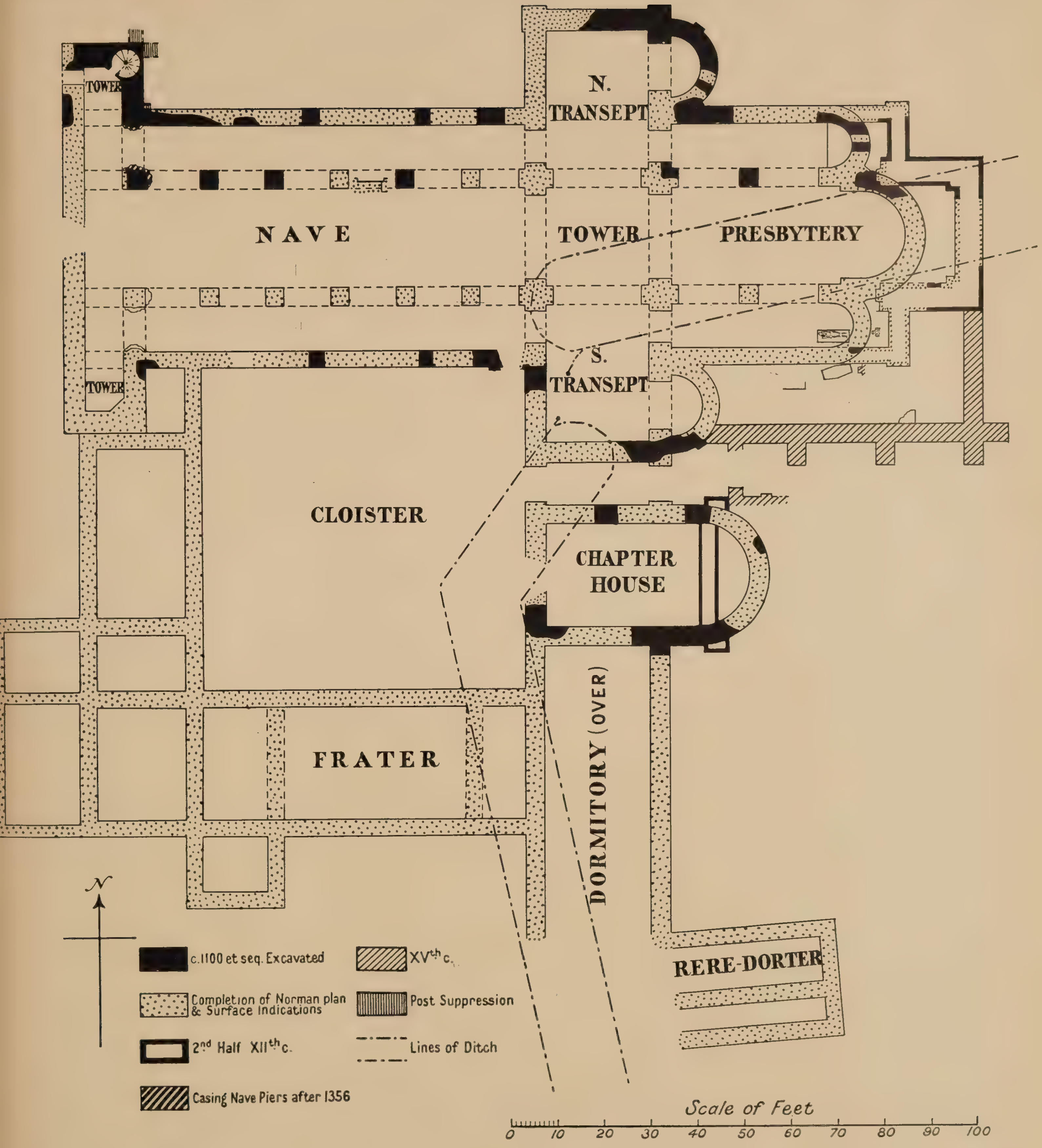
Two thinner-walled chambers, probably of later date, covering the west face of the kitchen and that of the apartment to the north of it, projected from the line of the range westward. They probably represent the position of bakehouse and brewhouse.

The infirmary. Of the infirmary hall and chapel nothing certain can be said, but in the normal position, east of the eastern range and south-east of the church, the turf showed signs of buildings, but the grass is rank here and no definite lines could be traced.

An eighteenth-century pigeon-house stands to north-west of the church. South of the monastery and in front of the modern priory house is a large fishpond. As this is the only area upon the site suitable for containing water, this is probably an enlargement of a series of monastic carp-ponds.

The priory mill occupied a position upon the river immediately to the east of the dorter and of the infirmary hall. A modern house now stands upon its site, but the mill arrangements are clearly traceable.

General Conditions of Excavation. The soil from constant shifting and resulting admixture of mortar is especially tough and unsuitable for uncovering delicate remains. A large amount of Roman debris found, in addition to what is in position, proved that much material of the building was re-used Roman brick, doubtless providing quoins, arches, and coursing in the walls, as at


TOWER
N. TRANSEPT
NAVE
TOWER
PRESBYTERY
S. TRANSEPT
TOWER
CLOISTER
CHAPTER HOUSE
FRATER
DORMITORY (OVER)
RERE-DORTER
N
c.1100 et seq. Excavated
Completion of Norman plan & Surface Indications
2nd Half XIIth c.
Casing Nave Piers after 1356
XVth c.
Post Suppression
Lines of Ditch
Scale of Feet
0 10 20 30 40 50 60 70 80 90 100

F.H.F. mens. et del. 1935

Colne Priory, Essex: ground plan

Published by the Society of Antiquaries of London, 1938

St. Botolph's, Colchester. The supply of this drawn upon must have been very considerable. Flint provided the main material, and Barnack rag and Caen stone also occurred. There were quantities of brick and tile rubble of all periods.

The post-Suppression history. The making of the royal inventory was followed within a month (July 1536) by a grant of the priory property to John de Vere, the fifteenth earl. There are therefore no government documents dealing with a site awaiting disposal, no survey, and no orders concerning the disposal of the buildings, this being at the discretion of the earl as grantee. No evidence appears to exist of what was done during these early post-Suppression years. The only outstanding fact seems to be that the priory church had come to be regarded as a desecrated building, as the interments of the De Veres in it abruptly cease, though a considerable portion, if not all, of the church was still standing with a large number of the monuments still undisturbed. This cessation of interment is sharply marked, as the earl to whom the grant was made died only three years afterwards in 1539, and, though his death took place at Colne itself, the place of burial selected was in the church at Castle Hedingham where his monument still exists, and where his son John, the sixteenth earl, is also buried, though the latter expressed in his will a desire to be interred at Colne. This earl most probably left the priory church undisturbed as he had private leanings to the old religion.

His son, the seventeenth earl, was a notorious spendthrift. He parted by sale with the property at Colne, so long associated with the De Veres, disposing first of the lay house, park, and manor in 1583 to Roger Harlackenden, his master of the horse and Essex steward, for the sum of £2,000. In 1592 he disposed of the second manor, that of the priory, to Roger Harlackenden's son Richard, and the De Vere connexion with Colne was finally severed. The Harlackenden family came from Woodchurch in Kent and remained in possession in the male line until late in the seventeenth century.

The priory church is mentioned in the 1592 conveyance in much the same terms as in the Dissolution grant, but this is probably only a quotation from the latter, and in a survey of 1598 it is not apparent. In any case, before the year 1631 the majority of it had been destroyed, and it was only represented by the wreck of some part of the choir. The nave seems to have been the first portion to be destroyed, together with the transept or a portion of the latter, and with the beginning of the destruction two of the still existing monuments had been transferred to the parish church, either from being in the way, or from being in a portion marked for destruction.[1] A reference in the papers of

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[1] Those of Robert, fifth earl, *ob.* 1296 (an effigy of that date on a table tomb of *c.* 1340, the latter very probably bearing formerly the effigy of Robert, sixth earl, *ob.* 1331), and of Richard, eleventh earl, *ob.* 1417, and his countess, *ob.* 1451 (a large double tomb).

Richard Harlackenden, son of Roger, dates the removal of the third, spoken as the 'great tomb',[1] in the first quarter of the seventeenth century. The remainder of the tombs, comprising the earliest and the latest in date,[2] were left in the remains of the priory church where they were viewed by Weever some time before 1631 in what he describes as an 'old chappell'. From this time onwards the then surviving monuments were divided into two sections, first those which had been transferred to the parish church, and secondly those remaining in the standing portion of the priory church. The latter from later evidence we learn was certainly the choir with the eastern chapels.

The Interments and Monuments. Of important burials a large number is definitely recorded. Morant enumerates twenty-one, the last of which (John, sixteenth earl) is erroneous, as he was buried, not at Colne, but at Castle Hedingham. The remainder, with one addition (the wife of the eleventh earl, Richard) whom he does not record, are Colne interments.

The following list gives the names, dates of decease, and any recorded note bearing on the position of burial:

Alberic de Vere the Founder, 'Senior'
Beatrix his wife
William their youngest son
Epitaph quoted by Weever. All died in the first decade of the twelfth century and were buried in the monastery at a very early stage of its existence.

Alberic 'Junior', first Great Chamberlain. Killed in London, 1141.
Alberic, first earl of Oxford, *ob.* 1194. Epitaph quoted by Weever.
Alberic, second earl, *ob.* 1214. Epitaph in Book of Colne Priory.
Hugh, fourth earl, *ob.* 1263 and Hawisia de Quincy his wife. Epitaph quoted by Weever.
Robert, fifth earl, *ob.* 1296 and Alice de Samford his wife.
Robert, sixth earl, *ob.* 1331.
John, seventh earl. Killed at Rheims, 1360. Buried at Colne 'on the South Side of the Choir', and Maud de Badlesmere his wife. In her will[3] (probate), 1366, 'To be buried in the Conventual Church [of Colne] near the body of my worshipful lord deceased in the upper arch where the tomb for our bodies . . .'.
Thomas, eighth earl, *ob.* 1371. Buried 'on the north side of the Chapel of St. Peter'.
Robert, ninth earl, marquess of Dublin and duke of Ireland, K.G. Killed by a boar at Louvain, 1392. His body brought to Colne and interred 1395, the king, Richard II, attending.[4]
Alberic, tenth earl, *ob.* 1400. No account of burial. At Colne.
Richard, eleventh earl, K.G., *ob.* 1417. Apparently had a special chantry as a later will

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[1] That of Thomas, eighth earl, *ob.* 1371, shown by King's drawing to be large enough to hold three effigies. Only that of the earl survived.

[2] A mid-thirteenth-century figure in armour, possibly Hugh, fourth earl, *ob.* 1263, and John, thirteenth earl, *ob.* 1512, and his countess, together with seven other effigies of intermediate periods.

[3] *Essex Arch. Soc. Trans.*, vol. 21, pt. 2, N.S., p. 263: Rev. G. M. Benton, F.S.A.

[4] For funeral see Walsingham, *Hist. Angl.*, ii, 219.

directs burial at Colne 'before the altar there called Erle Richard's altar'. Probably in the nave on north; also Alice Sergeaux his wife, on the same monument.

John, thirteenth earl, K.G., K.B., *ob.* 1514.[1] Buried before the altar in the Lady Chapel and Margaret Neville his first wife.

Sir George Vere, brother of the thirteenth earl, *ob.* 1503. Buried by his will before 'Earl Richard's altar'.[2]

John, fourteenth earl, *ob.* 1526. The last interment recorded in the priory church.

It will be noted that up to the Dissolution all the earls of Oxford were buried in the priory church, with the exception of the third (Robert) buried at Hatfield Broadoak, and John, twelfth, executed with his eldest son on Tower Hill and interred at Austin Friars.

Of the post-Dissolution condition of the monuments we have no evidence until the seventeenth century, at which time we have two sources of information, the first a short list by John Weever (*Funeral Monuments*, p. 614), who visited both ruined priory and parish church at some time previous to the year 1631.[3] The second is a set of drawings made, also in both buildings, by Daniel King in 1653, with fortunately a note attached to each drawing to say in which place it existed. This set of drawings (Brit. Mus. Add. MSS. 27348–27350) has a history. The originals were made as stated above in 1653 and were formerly the property of Lord Fairfax who was interested in scientific and antiquarian matters, and may have been made to his order, as he must have spent much time in the neighbourhood during the siege of Colchester in 1648, where he commanded.

They came in the early eighteenth century into the hands of Smart Lethieullier of Aldersbrook Park and were included with many other drawings in a joint collection made by him and Sir Charles Frederick, now occupying three volumes in the British Museum MSS. collection. At Mr. Lethieullier's death Sir Charles expected to obtain the volumes as a right, but Horace Walpole, by a rapid sleight of hand purchase, secured them, as is recorded in his own hand in the first volume, 'for the sum of three score pounds'. This caused an irreconcilable quarrel between him and Sir Charles Frederick. Copies of these drawings were embodied in Gough's *Monumental Effigies*, 1786, and include one which is acknowledged as a Daniel King drawing but is now absent from the Lethieullier collection. Lethieullier annotated the drawings in 1736 and states that in that year the four surviving effigies of the present day were then in the parish church, and that all the effigies described by

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[1] Account of funeral in MSS. Harl. quoted by Rev. S. A. A. Majendie, *The Family of De Vere*, etc., p. 30.

[2] *Essex Arch. Soc. Trans.*, vol. 21, pt. 2, N.S., p. 261.

[3] Weever, published 1631. Material may have been collected much earlier.

Weever and drawn by King in the remains of the priory church had been totally destroyed.

The comparison of these two records is of considerable value and provides all the real evidence we have, as the eighteenth-century commentators,[1] though of value on other points, in this particular matter quote, requote, and misquote Weever and King, without advancing any independent observation, except (and this is useful) definitely proving that the three monuments transferred to the parish church remained there undisturbed except for some changes of position.

Weever's[2] account is short, poorly descriptive, and rather suggestive of a hasty note made in a poor light, as he fails to recognize animals at the feet of the figures which are given clearly in King, one of which still survives. His interest was in the armed figures and especially in the crossing or non-crossing of the legs, and it is probable that as far as his account goes it is reliable on this point.

Weever's description of the monuments is as follows:

> In this Parish Church are two monuments of the Veres, the one lieth crosslegged with a Saracen's head on his tomb, which Saracen this Earl slew in the Holy Land.[3] The other of them with his wife, lieth intombed; at her feet is the Talbot, at his feet the Boar: they are both shamefully defaced.[4] They were removed out of the Priory near adjoining at the Suppression, as I was told.

Unless he overlooked it, the third and largest monument[5] was not as yet in the Parish Church but it certainly was in 1653, as King found and drew it there.

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[1] Lethieullier, Holman, Gough, Morant, Cole, Stevens.

[2] For Colne in Weever see p. 613 *et seq.*

[3] The only cross-legged effigy formerly in the parish church still exists. Probably Robert, fifth earl (Hist. Mon. Comm.); was first placed in the centre of the chancel, then moved to the north side, where seen by Gough in 1786. The Saracen's head, a movable object, was, by King's time, 1653, upon the 'great tomb' (probably Thomas, eighth earl), where it figures in King's drawing.

[4] Effigies of Richard, eleventh earl, and Alice Sergeaux his countess (H. M. C.). His feet are actually on a lion, and two small 'talbots' bite her robe. Still exist. In the parish church were 'under the Pulpit' (Gough, vol. ii, pt. II, p. 49). Seen there by Horace Walpole 1748, and taken for duke of Ireland and Lancerona.

[5] Still existing. Probably Thomas, eighth earl (H. M. C.). Believed to be the ninth earl, duke of Ireland, by Col. Probert, F.S.A. The evidence is against this as the duke had a special grant of arms with Ireland in the 1st and 4th quarters, which does not appear on the jupon. The 'Saracen's' head was placed on this tomb in King's drawing. It had no saracenic appearance, and was probably the head or foot rest of another effigy, possibly that of the eighth earl's countess Maud de Ufford, whose family bore as a crest just such a head. Tomb moved to the church by Richard Harlackenden in first quarter of seventeenth century. Room for three effigies. Placed 'on the north side of the nave . . . enclosed in a pew, only the front and the east end appearing' (Gough, vol. i, pt. II, p. 130). 'Not expressed in Weever.'

Of the surviving monuments at the priory he says:

> The house is standing at this day converted into a private dwelling-place, as also the old Chappell to it wherein are divers monuments . . . but they are all gone to decay and their inscriptions by time and stealth quite taken away.
>
> (1) One tomb of alabaster thought to be the ancientest is the portraiture of a man lying in his armour, crosslegged, but what was at his feet cannot be discerned.[1]
>
> (2) One lying armed with the blew Bore under his head, also crosslegged I am informed but now destroyed from the middle downwards.[2]
>
> (3) A third of wood, armed crosslegged, on his target the arms of Oxford.[3]
>
> (4) By him a woman made of wood which is thought to have been his lady and countess.[3]
>
> (5) Two more armed, crosslegged likewise in wood: one hath a hound or Talbot under his feet.
>
> (6) The cote armour of the other is quite broken away with his target.[4]
>
> (7) Here is one in alabaster not crosslegged, the Garter[5] about one of his legges, what is under his feet cannot be discerned.
>
> (8) A woman of alabaster with a falcon under her feet.[5]
>
> (9) A little monument of alabaster which is the image of one in a gowne with a purse hanging at his girdle. In length about 4 ft.[6]

On carefully collating the list of Weever and the drawings of King it becomes clear that, in spite of minor discrepancies, the effigies examined were identical, that Weever recorded two cross-legged wooden effigies and the 'little one of alabaster' not figured by King, all at the priory, and that King drew one mid-fourteenth-century countess at the priory, and the 'great tomb' at the parish church both omitted by Weever. As the period of Weever's inspection coincides with that of the removal of the latter, it is possible that it had been dismantled and was in process of transfer.

Where they disagree on detail King is the more reliable source, as his drawings, though crude and lacking in perspective, are fairly accurate in detail.

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[1] Is the one stone cross-legged effigy common to Weever and King at the priory. King describes it as colossal, and of *freestone*, and it is the earliest in his drawings. Appears to be about mid-thirteenth century. Probably Hugh, fourth earl (*ob.* 1263).

[2] The mutilated effigy of King. Knight of period of John, seventh earl (*ob.* 1360), figured with lady of same period, ? his wife Maud de Badlesmere.

[3] The only cross-legged knight in wood shown by King as associated with a lady. He, however, shows no shield. Both knight and lady according to King were painted effigies. They apparently belong to the first third of the fourteenth century. Possibly Robert, sixth earl (*ob.* 1331), and his countess Margaret de Mortimer.

[4] Nos. 5 and 6 are not figured by King; possibly in bad condition. Morant misquotes Weever, stating that they were removed to the parish church, which they never were.

[5] Knight of Garter in armour of late fifteenth or early sixteenth century. Feet on a stag. Lady, feet not on a falcon but a winged boar. John, thirteenth earl, and his countess.

[6] The only reference to this effigy: not shown in King.

Their total list of effigies is thirteen in number, and to these a fourteenth was able to be added during the work at Colne. This consisted of two fragments of a slab originally about 7 ft. in length, the upper carrying the inscription 'Albericus de Ver' and the lower showing the lower limbs of an effigy in low relief. It was obviously the earliest in date of all, the frame surrounding the effigy showing ornament of mid-twelfth century, and thus corresponding with the decease of the first De Vere Great Chamberlain killed in London in 1141. This has been preserved with the surviving effigies. It was found in the rockery of the priory water garden, where its remaining portion may still be (pl. LXXXVI, 1).

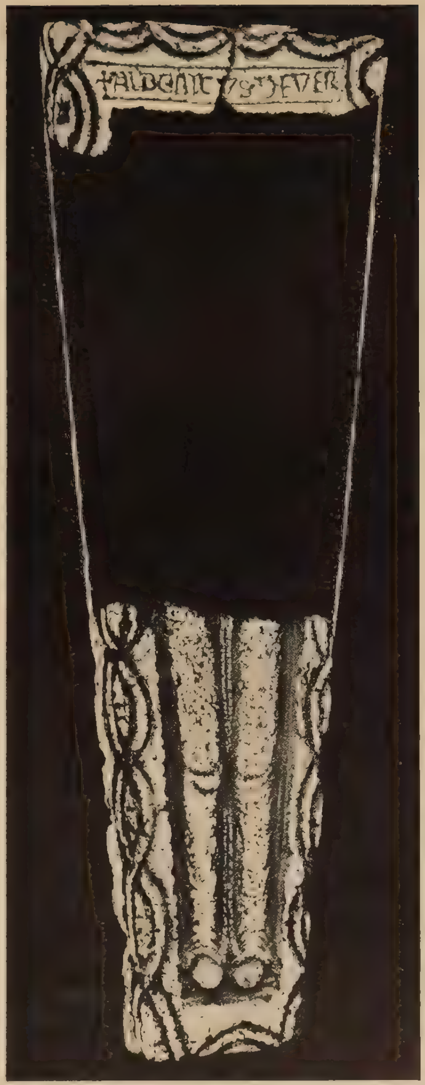
Between the visits of Weever and King the monuments which had been removed into the parish church ran great risk of damage, as in 1641 the Puritans upon an order from the House of Commons 'took down all images, pictures, and suchlike in glass', and generally damaged anything which to them 'savoured of Popery'.

Weever describes them, at least ten years before, as 'shamefully defaced', so they evidently escaped much further injury as their condition at the present day is good, with very little loss of their component parts. Gough, some 150 years after Weever, also describes them as in very bad repair.

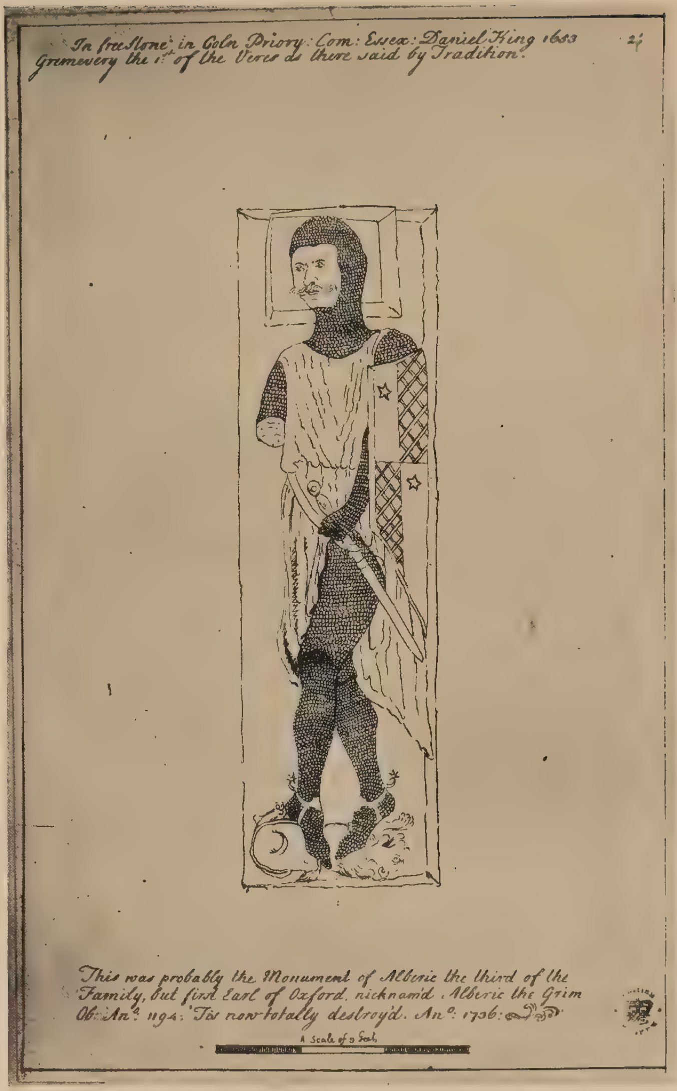
After the descriptions of Weever and King the monuments in church and priory remained in these buildings without further change, until the destruction of the last relic of the latter. This occupies a period of nearly a hundred years from the visit of Weever. The remains of the choir, at this time known as the Monument House or Tomb House, doubtless underwent the degenerative changes following on age and alteration.

By the late seventeenth century this had been divided into two parts, one portion serving as a sleeping apartment for servants, probably the stablemen. This was known in the 'Inventory of the Chattles' of Richard Harlackenden, *c.* 1631, as the Monument Chamber, the contents being bed furniture. The other portion was known as the Monument House, its contents described as 'a few olde monuments with other lumber'. A curious haunting of this building towards the end of the century is vouched for by no less a person than Richard Baxter, who visited the place. The Mr. Harlackenden of the period had been annoyed by the statement of the servants who slept there that every night at two o'clock they were awakened and alarmed by the boom of a great bell. Determined to prove the absurdity of this he ordered a bed to be prepared for him in the chamber, and repaired there to sleep. Having fallen asleep he was suddenly awakened at the stated time by a tremendous stroke of the bell. His scepticism was completely shattered and he sprang from bed and left the chamber at his utmost speed.

The estate remained in the Harlackenden family until 1672, when it passed,


+ALBERIC VS DE VER

1. Probably Alberic, ob. 1141. First De Vere Great Chamberlain. Barnack Slab. In Colne Priory Church until *c.* 1730. Found in water-garden. Now at Bevills, Bures, pending removal to St. Stephen's Chapel.


In freestone in Coln Priory: Com: Essex: Daniel King 1653
Grimevery the 1st of the Veres as there said by Tradition.
24
This was probably the Monument of Alberic the third of the Family, but first Earl of Oxford, nicknam'd Alberic the Grim Ob: An°. 1194: 'Tis now totally destroy'd. An°: 1736:
A Scale of 2 Feet

2. Possibly Hugh, 4th Earl of Oxford, ob. 1263. Effigy in freestone. In the Choir of Colne Priory Church until destroyed *c.* 1730.

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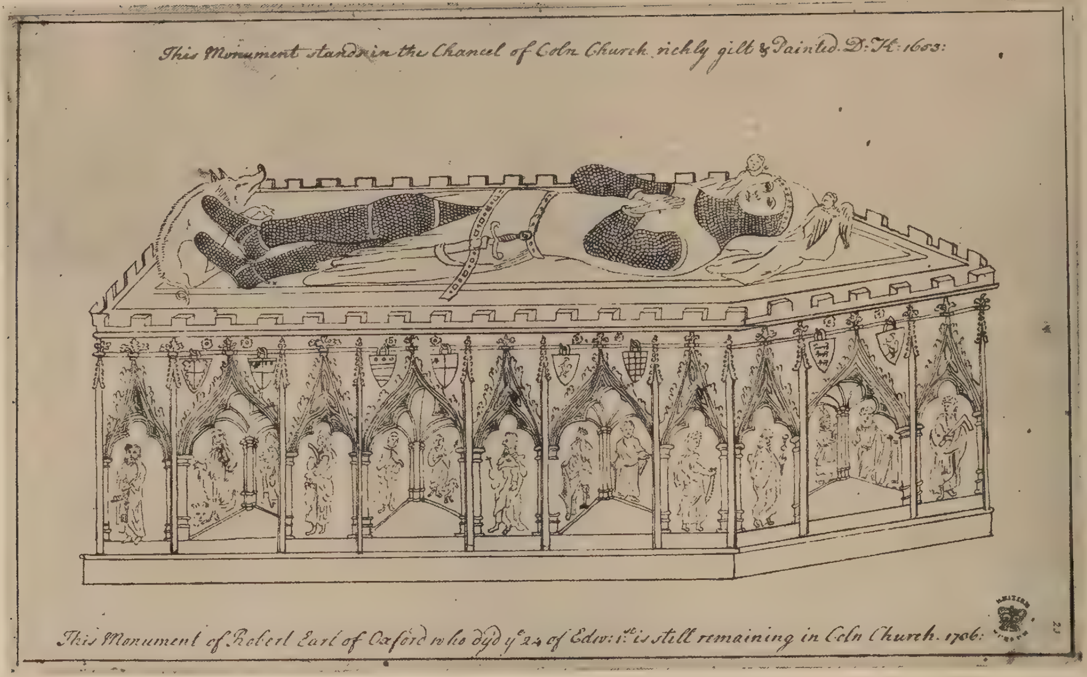
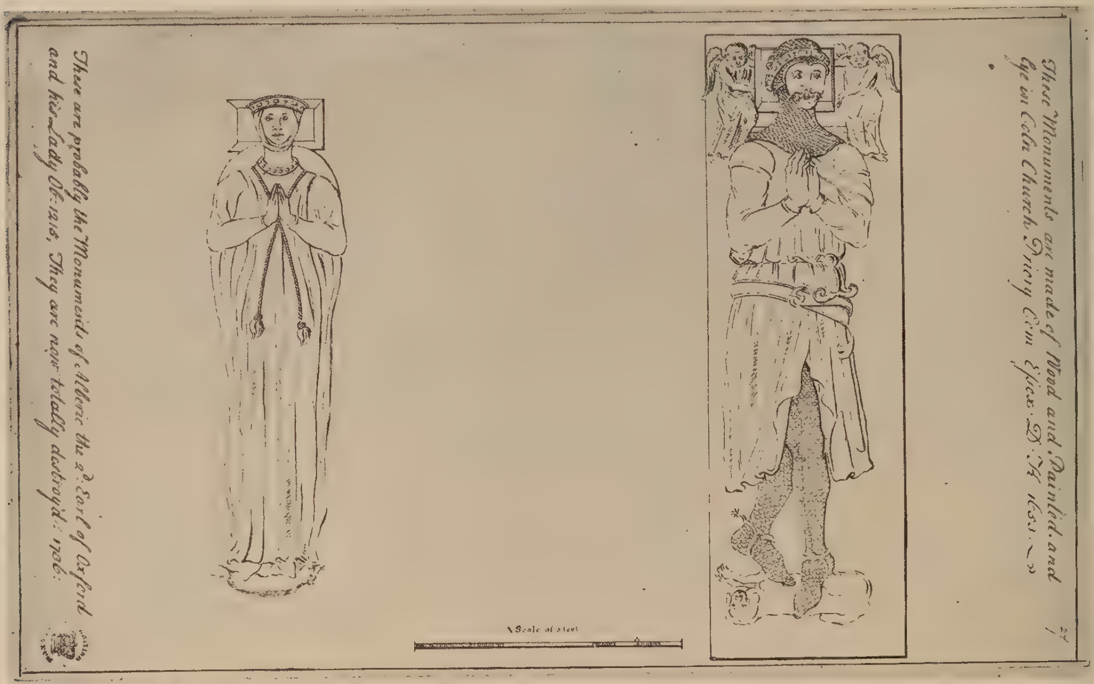

This Monument stands in the Chancel of Coln Church richly gilt & Painted. D:K:1653:
This Monument of Robert Earl of Oxford who dyd yᵉ 24 of Edw: 1ˢᵗ is still remaining in Coln Church. 1706:

1. Probably Robert, 5th Earl of Oxford, ob. 1296, on tomb of *c.* 1340. Freestone effigy, formerly coloured. In Colne Priory Church. Moved to Colne Parish Church between 1536 and 1631. First in centre of Chancel, later moved to north side. Moved to modern priory *c.* 1827 and to St. Stephen's Chapel, Bures, 1935.


These are probably the Monuments of Alberic the 2d: Earl of Oxford and his Lady Ob: 1215. They are now totally destroy'd: 1706:
Scale of 5 feet
These Monuments are made of Wood and Painted and lye in Coln Church Priory Coln Essex: D: K: 1653.

2. Possibly Robert, 6th Earl of Oxford, ob. 1331, and his wife, Margaret Mortimer. Effigies of wood, painted. In Colne Priory Church until *c.* 1730, when destroyed.

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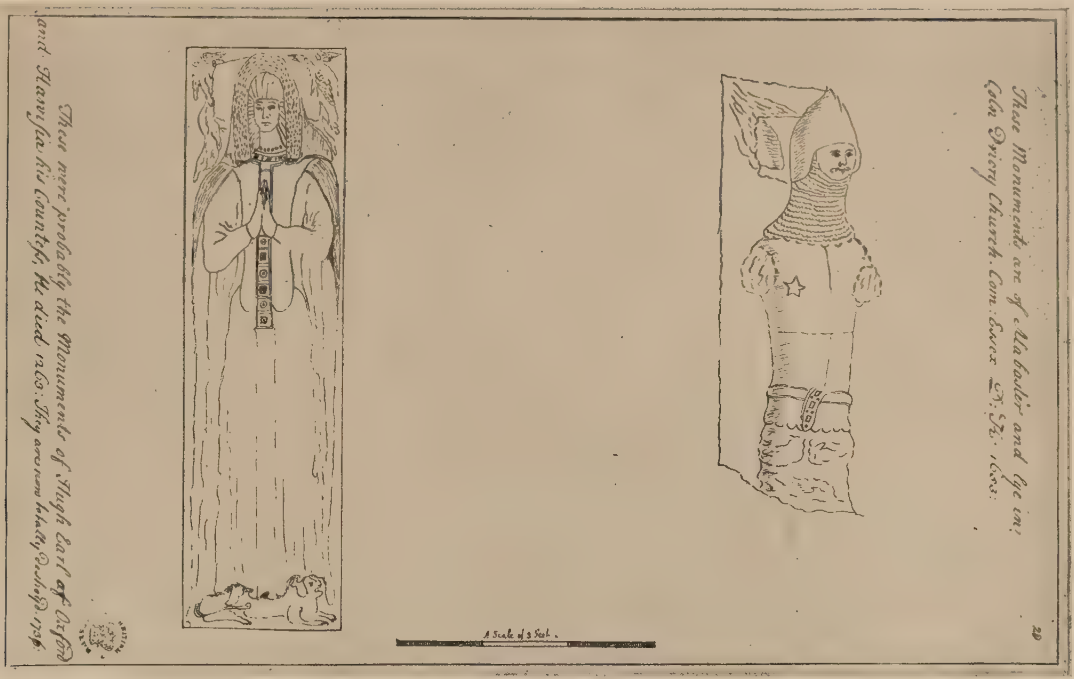
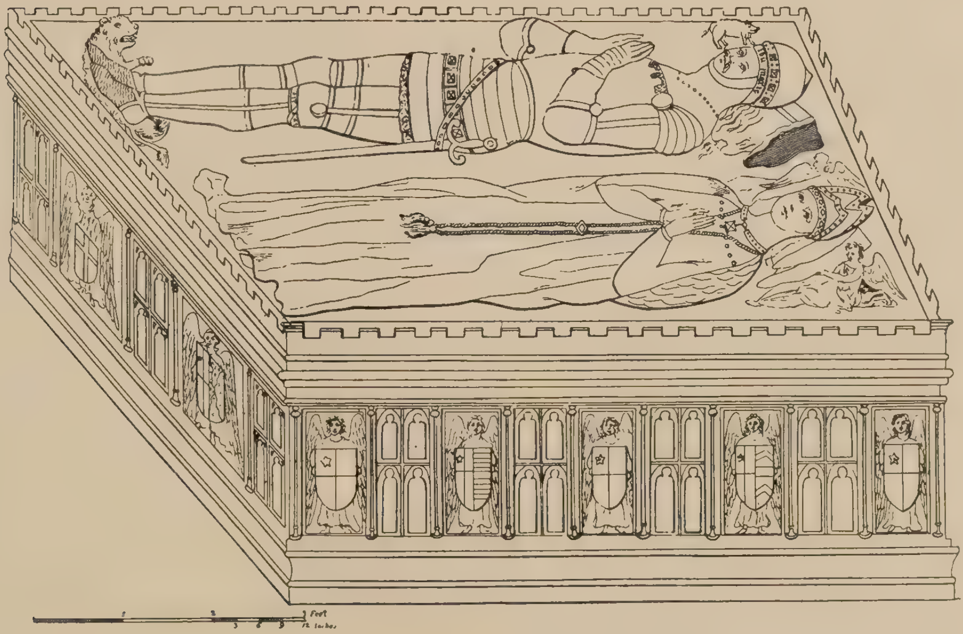

These Monuments are of Alabaster and lye in:
Coln Priory Church. Com: Essex D: K: 1653:
20
A Scale of 3 Feet.
These were probably the Monuments of Hugh Earl of Oxford
and Hawisia his Countess, He died 1263: They are now totally Destroyed. 1736.

1. Probably John, 7th Earl of Oxford, ob. 1360, and his wife, Maud Badlesmere, ob. 1365. Alabaster effigies. In Colne Priory Church on south side of choir. Destroyed *c.* 1730.


Feet
12 Inches

2. Richard, 11th Earl of Oxford, ob. 1417, and Alice Sergeaux, his wife, ob. 1451. From Gough, *Monumental Effigies*, vol. ii, part 2, pl. xxiii. Alabaster. In Colne Priory Church, probably in nave. Moved to Colne Parish Church between 1536 and 1631 and placed 'under the pulpit'. Cut into two portions and moved to modern priory *c.* 1827. Again moved, 1935, to St. Stephen's Chapel, Bures, and re-erected as one tomb.

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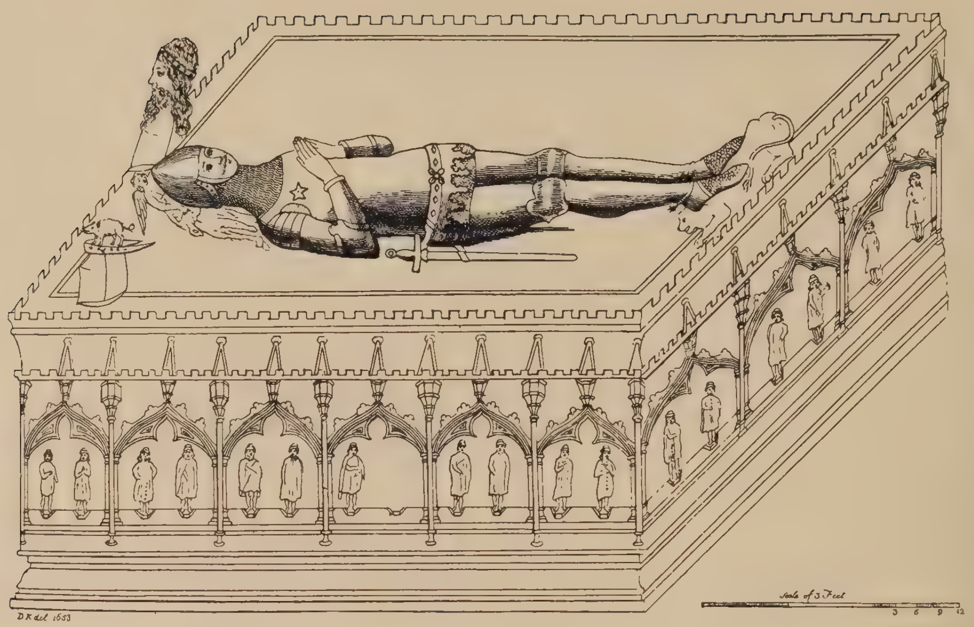
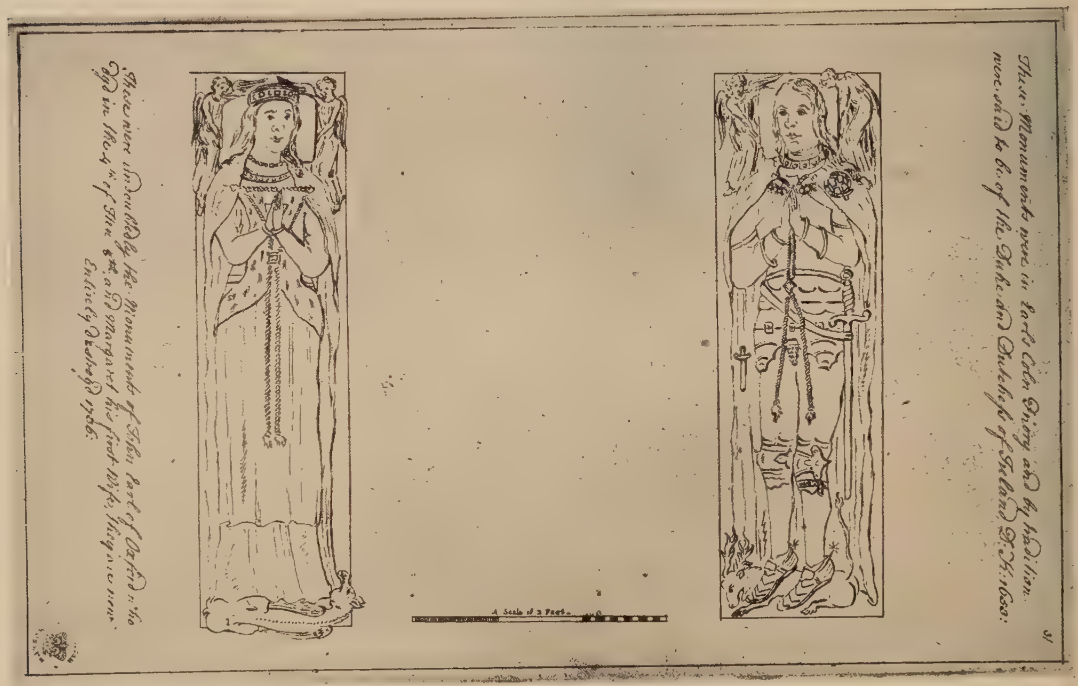

D K del 1653
Scale of 3 Feet
3 6 9 12

1. Probably Thomas, 8th Earl of Oxford, ob. 1371. From Gough, *Monumental Effigies*, vol. i, part 2, pl. iii. Formerly triple tomb. Alabaster. In Colne Priory Church on north side of Chapel of St. Peter. Removed *c.* 1610 (Harlackenden Papers) to Colne Parish Church. Placed on north side of nave enclosed in a pew. Removed *c.* 1827 to modern priory and cut down to single effigy size. Moved 1935 to St. Stephen's Chapel, Bures, as a single tomb.


These were undoubtedly the Monuments of John Earl of Oxford who dyd in the 4th of Hen 8th and Margaret his first Wife, they are now Entirely destroyd 1706:
These Monuments were in Earls Coln Priory and by tradition were said to be of the Duke and Dutchess of Ireland D: K: 1653:
A Scale of 3 Feet
31

2. John, 13th Earl of Oxford, K.G., ob. 1514, and his first wife, Margaret Neville. Alabaster. Before the altar in the Lady Chapel, Colne Priory Church. Destroyed *c.* 1730.

Published by the Society of Antiquaries of London, 1938

by marriage of the heiress, to the Androwes family, and in the same way in the early eighteenth century to a Mr. Wale. This is a critical point in the history. Mr. Wale was a most destructive innovator. The entire remaining portion of the church was swept away, and the ditch already mentioned was dug directly through the centre of the choir, and through the eastern cloister. Many graves were dug through and destroyed, and the remaining effigies and monuments were entirely eradicated, the only trace remaining of them in 1746 being two alabaster trunks of a knight and lady lying in a summer-house in the garden.

Holman about 1740 says: 'The Priory Church is entirely pulled down, the foundations dug up and stables erected on the site.'

The Rev. William Cole, writing in 1746, says: 'He' (Mr. Wale) 'has himself very lately taken away a great part of the old foundations to make his gardens level and in digging has found several pieces of antiquity which I shall mention presently.' These were stone coffins from the De Vere interments, three of which are now at Colne Park, coins (undescribed), a round piece of lead inscribed Thome Rothyng, and a basin of gilt copper with arms enamelled, Gules five towers impaling France old, azure semée of fleur-de-lis or, another 'apparently Paly but gilt over on the back'.

Gough, writing about 1786, says: 'Weever saw in the Chapel of the Priory no less than eight[1] monuments in wood and stone. A variety of accidents degraded this chapel to a stable, in which the monuments were seen by Holman the Essex antiquary.[2] When the priory house was rebuilt or recased in its present form the site of the chapel was converted into an ha ha, and in its banks I saw many human bones in my first visit 26 years ago' (i.e. *c.* 1760) 'and in a succeeding visit conversed with persons who remembered the chapel itself, with the monuments and their removal and the opening of the graves. Some of the mutilated alabaster trunks lay so late as 1746 in an old summer-house in Mr. Wale's garden'.[3]

It will be noted that this passage definitely fixes the site of the graves then destroyed, and of the then surviving monuments, as the choir of the conventual church, and this, it will be seen is corroborated by the evidence we have of the monuments themselves and the recorded positions of some of them. This portion of the buildings was known, as has been mentioned, in the time of the Harlackendens as the Monument Chamber, and up to Mr. Wale's destruction of it was termed the Tomb House.

Mr. Wale's activities did not cease with the destruction of the monastic remains. He now proceeded to the remodelling of the old De Vere house which has been mentioned as standing to the west of the precinct and which was known by this time as the priory. Holman (1740) says: 'The Priory House was a wooden fabric and is partly pulled down and quite altered from what it was that it may be called a new structure. The house was built at some distance from the Church[1] upon a declivity near the river Colne and inclosed with a brick wall containing within it about 12 acres'. Morant quoting the above adds a note 'John Wale cased it with brick'. The Rev. William Cole records that he saw 'also many pieces of marble and alabaster cut for chimney pieces', and adds that 'Mr. Wale stated that all the chimney pieces in the house were made from the ruinated tombs of the Oxfords'.

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[1] Weever actually mentions nine.

[2] In reality Holman only quotes this from Weever.

[3] Gough, vol. ii, pt. II, p. 50. Quoted from Rev. W. Cole on the effigy remains.

Before Mr. Wale's time the hall in the old house and the chamber over the hall were ornamented by a beautiful series of coats of arms in stained glass, those in the chamber surrounded by the Garter. They represented De Vere marriages, and arms of families connected with the De Veres. At the end of Mr. Wale's 'improvements' Lethieullier in 1736 states that they were all gone. They have been stated to have gone to the modern Colne Park, but the glass there only exhibits one De Vere coat and is all of late date.

Gough records one final piece of vandalism: 'Many charters with seals affixt had been laid in an upper room of the Priory House, after it was made a modern mansion house, and were burnt by the Lady of the Manor as useless lumber about ten years ago.' From the date this would apparently be Mr. Wale's great-grand-daughter, Anne Holgate.

From the above it is evident that, apart from what survived in the skeleton of the house and in chimney-pieces, these changes practically effaced every medieval feature from the site above ground. The house so maltreated by Mr. Wale survived for another hundred years passing by the marriage of Mr. Wale's daughter Anne to Mr. John Holgate, and on her death in 1767 to her eldest grandchild Anne Holgate who married the Rev. Thomas Carwardine, prebendary of St. Paul's and vicar of Earl's Colne. In the time of their son Henry Holgate Carwardine the last of the medieval structures upon the site was finally swept away, as about the year 1827 Mr. Carwardine pulled down the old De Vere house, which had been remodelled by Mr. Wale, and built the present house still known as the priory to the south of the former site. It was at the time of this new construction that the De Vere effigies surviving at that time in the parish church were again transferred to their old site, and were housed in a gallery attached to the present house where they remained until 1935. Their composition was a good deal altered in the new setting, as the tombs which had stood free were cut up and rearranged as bases for the effigies, which were placed in single file along the walls. It was in this condition that they were visited and described by the Historical Monuments Commission. Some niches and figures detached during the removal were built into the walls in the offices outside the house.

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[1] i.e. the parish church of St. Andrew.

With the monuments thus arranged, through two more generations of the Carwardines, the Rev. John Bryan and Major John Carwardine, the estate passed to the daughter of the latter, Florence, wife of William Howard Keeling, who conveyed it by settlement to the family of her cousin Col. Carwardine-Probert of Bevills Hall, Bures, Suffolk. By his instrumentality, as the gallery which they occupied was not felt to be a suitable permanent resting-place for the tombs, they have been (1935) removed and re-erected in the thirteenth-century chapel of St. Stephen near Bures, the divided tomb of the eleventh earl and his countess having been again united in its original form. This change undoubtedly deserves much congratulation; and it may be hoped will be a lasting one.

The writer desires in conclusion to offer his most grateful thanks to Col. W. G. Carwardine-Probert, F.S.A.,[1] and to Major Carwardine-Probert for their permission to explore the site and for much kind assistance in every way.

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[1] It was with great regret that we learned of the death of Col. Carwardine-Probert while the above was in the press.

IX.—*The Painted Ceiling in the Nave of Peterborough Cathedral*

By C. J. P. CAVE, *Esq., F.S.A., and* Professor TANCRED BORENIUS, *F.S.A.*

Read 29th April 1937

I

THE roof of the nave of Peterborough Cathedral (pl. xc) was erected in the latter years of the twelfth century and the ceiling was probably painted about 1220. It has frequently been stated that the ceiling was raised when the tower arch was changed from round to pointed, but there is no documentary evidence for this. If the original ceiling had been flat it would have had to have been widened by about 1 ft. 6 in. at each side to bring it to its present canted form, but there is nothing in the present condition of the painting to lead one to suppose that the roof was ever widened in this way. It has also been suggested that the ceiling was originally canted and that it has been raised by the width of the side boards which are painted in a different style from the rest of the roof, but it is difficult to believe that so great a work could have been undertaken for the sake of 20 in.

And, moreover, it seems quite possible that the roof never was raised, that it is still in its original position. The original timbers may have formed a scissor roof such as may still be seen in the north-west tower; the ceiling would have fitted such a roof exactly, including the boarding at the sides.

But whatever the original timbers were like they were removed by Blore in the restoration that took place in the years round about 1830. New timbers were then put in throughout and the ceiling was hung from these. In 1926 any of Blore's timbers that were defective were replaced and at the same time the back of the ceiling was covered with canvas.

The boards of the ceiling can be made out through the painting, but the construction is better seen in the transept ceilings, which are similar to that of the nave except that they are flat. Up to 1884 they retained a very considerable amount of colour, but this was removed when the ceilings were repaired by Pearson during the rebuilding of the central tower. Here and there the ghost of the original design can still be seen. There were probably no figures, the centres of the diamonds being painted with foliage.

The painting of the nave ceiling has unfortunately not come down to us in its original state. There are records of two late repaintings. The first of these is recorded in vol. ix of *Archaeologia*,[1] in a paper by Governor Pownall that was read before this Society 148 years ago. This repainting was done about 1740 to 1750, for about 1773 the bishop of Peterborough 'heard that the man, who about thirty years ago was employed to repair the ceiling, was still living. He sent for him, and learnt from him that the whole was repainted in oil. He told his lordship that several of the figures were intirely encrusted with dirt, but that upon applying a sponge they became clear and bright, whence he concludes that the last coat was of oil. He was altogether of the same opinion with what I had suggested, that the body of the painting (under which he supposed to be the coat of oil) was in distemper; parts came clear off from the wainscot. He assured his Lordship that he only retraced the figures, except in one instance the third or fourth compartment from the West door, where the whole figure peeled off: in this single instance he followed his own fancy, having nothing else to trust to, and even here he endeavoured to imitate the style of the rest. The Bishop said, he has no doubt of his veracity.' The author of the paper considered that what the workman thought to be a coating of oil was in fact varnish.

In the same paper pl. VII gives drawings of several of the figures[2] (C 4, 6, 20; N 5; S 5, and the musical instruments from N 7 and 13, and S 7) from sketches by Governor Pownall. The drawings are not very correct, but they were made after the eighteenth-century repainting and before that in the nineteenth, and therefore deserve some attention. A few points in connexion with them will be noted below.

The second repainting of which we have any knowledge took place just prior to 1835, in which year £30 was paid to Charles Layton for painting the ceiling of the nave.[3]

In former days this roof was not looked on with the same interest that we now feel. In Britton's *Cathedral Antiquities*[4] we read 'not only is the architectural character of these lofty parts deteriorated, but the obtrusive and spotty style in which they are painted offends the eye and injures the apparent magnitude and effect of the building'.

Yet in spite of the treatment which this ceiling has sustained in an uncritical age enough obviously remains to make it still a very remarkable monument.

The late Dr. M. R. James has traced a connexion between the paintings

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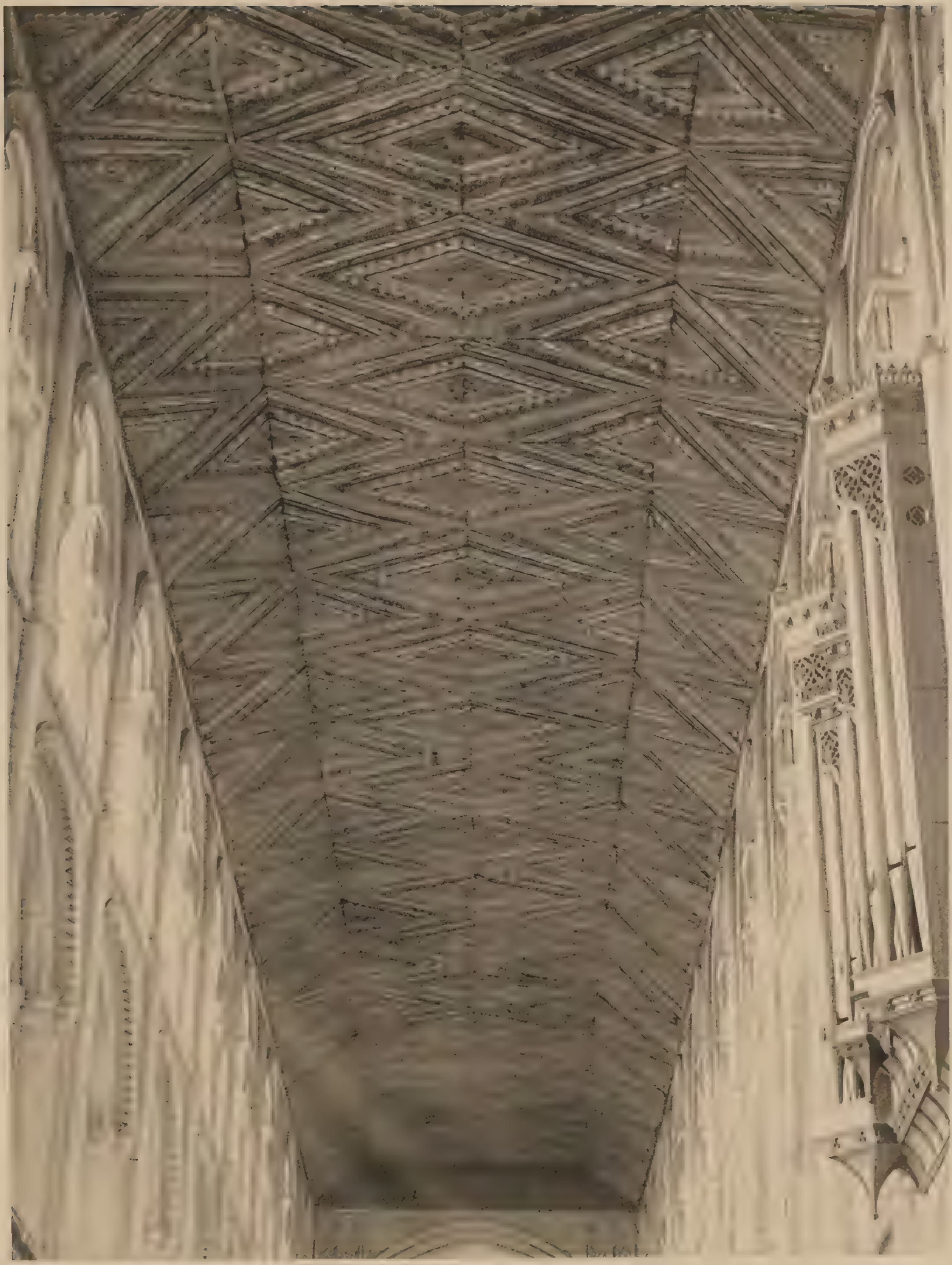
[1] *Archaeologia*, ix, 141 *et seq.* 'Observations on Ancient Painting in England. In a letter from Gov. Pownall to the Rev. Michael Lort.'

[2] The figures are in a series of lozenge-shaped panels in three lines; for ease of reference we have numbered them from the east end; the letters C, N, S, prefixed to the number shows whether the painting in question is in the central, the north, or the south line.

[3] This information was kindly supplied by the late Canon E. G. Swain from the chapter account books.

[4] Vol. v, p. 70.



The ceiling of the nave of Peterborough Cathedral

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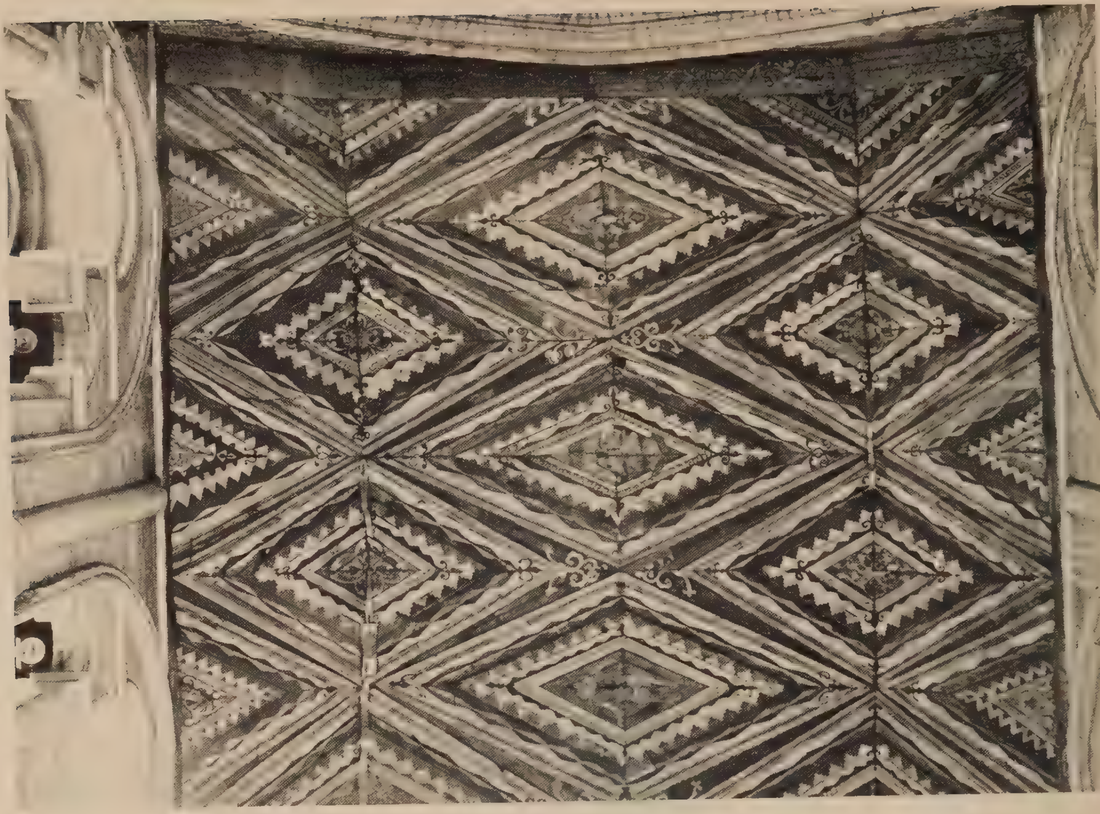

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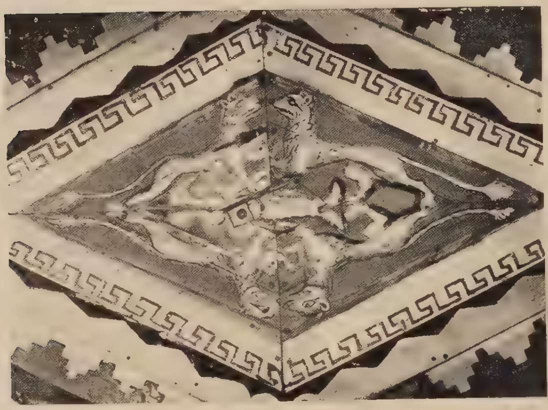

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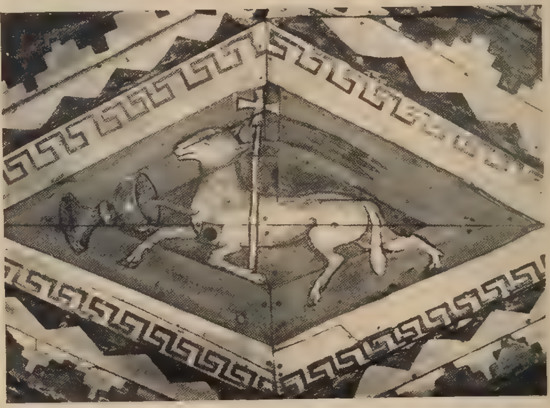

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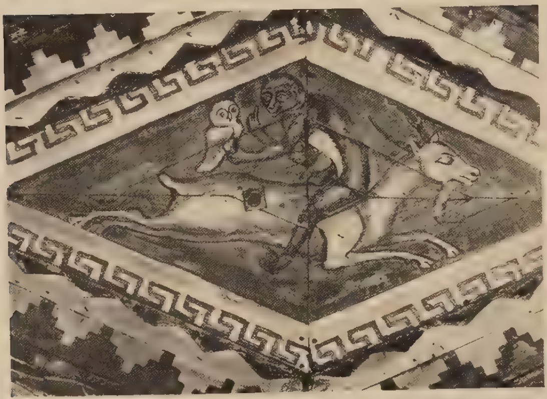

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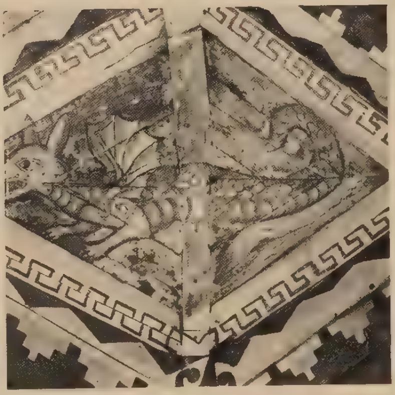

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Details of the ceiling of Peterborough Cathedral

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formerly in the choir of Peterborough Cathedral and paintings in the Peterborough psalter now in the Royal Library at Brussels.[1]

There are some resemblances between the roof paintings and some of the illustrations in this and other psalters of a Peterborough origin, including the Lindesey psalter in our own library. The resemblances very likely denote nothing more than a copying from a common source, but they are important in this way, that where we find them we may feel confident that the repainters have not changed the original design.

The general design of the ceiling painting is a series of diamond-shaped figures which are about twice as long as they are broad. The dimensions of the diamonds in the central line of paintings are about 22 ft. by 10 ft., and the inner diamonds which contain the figures are about 7½ ft. by 3½ ft. All of the twenty diamond-shaped panels on the central line have figures; on the north and south lines every other panel has a figure, the alternate ones being ornamented with a scroll pattern (pl. XCIV, 9), the only exception being the last panel but one on the south side which, though largely made up of scroll work, has in the centre a ram's head with mouth foliage (pl. XCIV, 8).

A Detailed List of the Paintings

C 1. Four lions, passant, facing each other in pairs; between their feet is a fish; only the body and tail are visible; two boards have apparently been renewed and repainted with the legs of two of the lions; their hind legs have been carried too far forward and have probably been brought over where the head of the fish should have been, for this must have come well beyond the small block, supporting the panels, where it now seems to end (pl. XCI, 2).

C 2. A head of Janus; a good deal of repair and repainting seems to have been done, but on the whole this fairly faithfully retains the original design. In the calendar of the Peterborough psalter at Brussels there is, under the month of January, a seated figure of Janus with a head strikingly like the head on the roof (pl. XCII, 1).

C 3. A creature with a beast's snout, ears like those of a pig, a human body partly draped but with bare arms, and legs of a beast with hoofs; there is also a long tail. The thighs are scaly, but this is probably modern painting. The beast holds a hammer in the right hand, and a spear with a banner in the left; it is looking up at the banner on which is a swastika. The figure may typify death, and would thus be contrasted with the next painting of the Lamb which typifies the Resurrection. In the Lindesey psalter a spear, in that case broken and associated with the tables of the law, is contrasted with the Lamb and banner (pl. XCII, 2).

C 4. The Agnus Dei; a lamb supporting on one of its forefeet the cross with the banner of the Resurrection; in front is a chalice into which blood is pouring from a wound in the lamb's breast. This is a common motive, especially in the north and in France, but the addition of the chalice is not so common (pl. xci, 3).

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[1] *Proceedings of the Cambridge Antiquarian Society*, ix, 178. The Brussels MS. 9961 has been described and many of the paintings have been reproduced in *Le Psautier de Peterborough* by J. van Den Gheyn.

C 5. St. Peter seated and carrying two keys in his right hand while his left hand supports a book which rests on his knee. The general attitude of the figure is no doubt original, but there has been much repainting; the drapery and the face have certainly been redone (pl. xcii, 3).

C. 6. An ape riding face to tail on a running goat; on its left hand an owl is perched; its right hand is extended towards the owl, and one finger is extended, perhaps in mock benediction; under its arm the ape holds a lure. A scene very much like this is to be found in the Peterborough psalter[1] in Brussels. This design may have had some magical significance (pl. xci, 4).

C 7. St. Paul holding a long sword in his right hand and a book in his left. As with the figure of St. Peter, a great deal of repainting has been done; most of the drapery and probably the face have been repainted. The bottom plank on the right-hand side seems to be entirely new. The left foot of the figure is badly drawn and is quite different from the right foot (pl. xcii, 4).

C 8. A king seated with a sceptre in his right hand and a cup-shaped object in his left; as at present painted there seems to be smoke coming out of the cup, but it is uncertain whether this may not be modern. Can this be meant for St. Edward, King and Martyr? (pl. xcii, 5).

C 9. An archbishop holding a cross staff in his right hand while his left hand is on an open book which rests on his knee. There is lettering on the book; some of it may have consisted of real words, or it may merely have been a simulation of lettering. The only thing now visible is $\overset{\text{VI}}{\text{God'}}$ which is certainly modern.

C 10. A king with a sceptre in his left hand; his right hand is pointing obliquely upward, and the index finger is extended. The figure has a moustache and a large imperial beard: these are certainly modern additions.

C 11. An archbishop; his right hand is extended with the index finger pointing obliquely upwards; a book rests on his left knee, but the left hand is not now visible. There are seven pseudo crosses on the pallium which have certainly been repainted.

On the book are the letters C O
B. L
E Y
1834

and on the hem of the archbishop's robe R$^{\text{D}}$ LAYTON
1834 SEXTON.

This sexton was presumably a relation of Charles Layton who painted on the roof; he is still remembered by the present staff, who had a tradition that his name was perpetuated in this manner (pl. xcii, 6).

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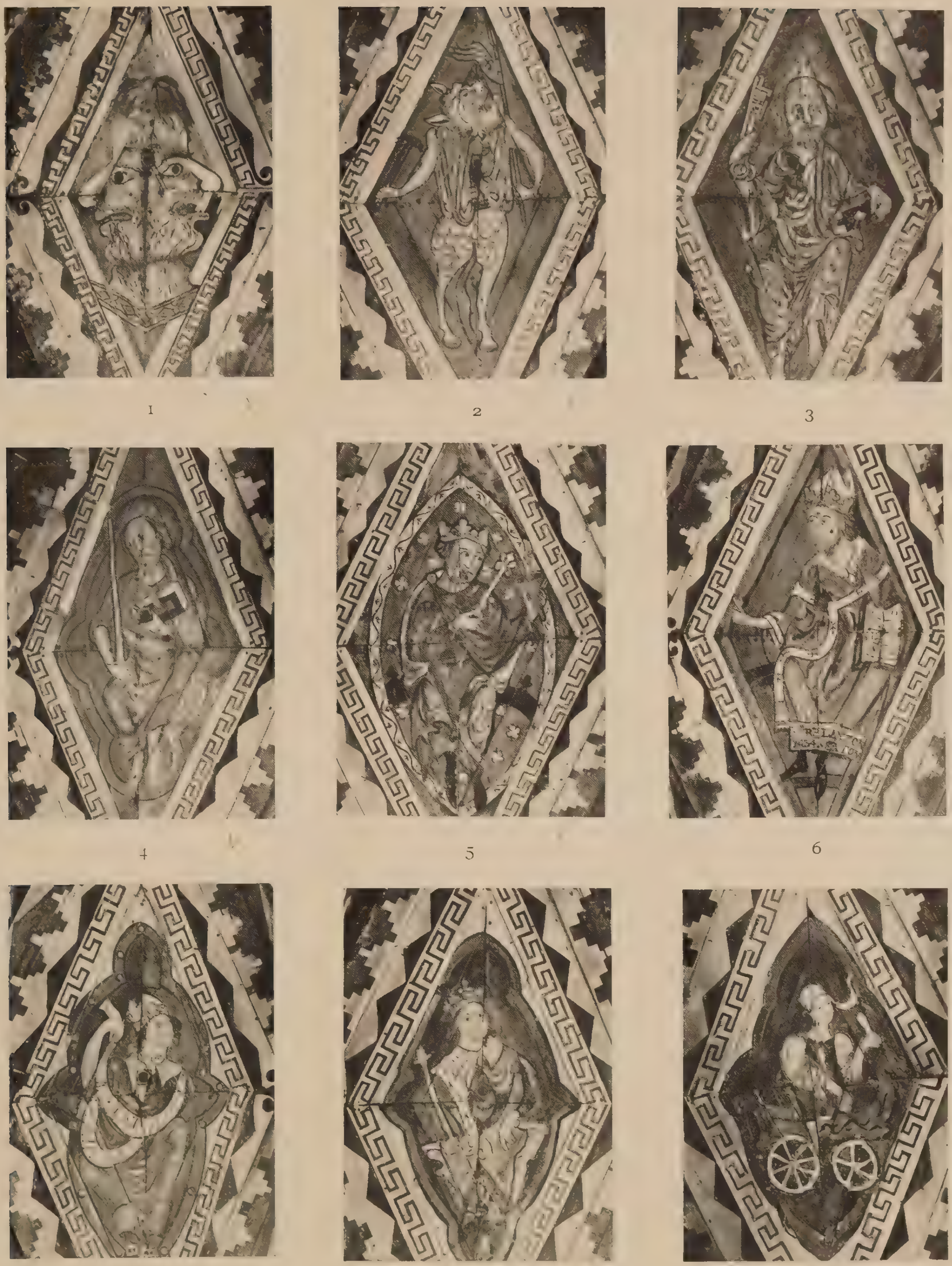
[1] fol. 10.



1 2 3

4 5 6

7 8 9

Details of the ceiling of Peterborough Cathedral

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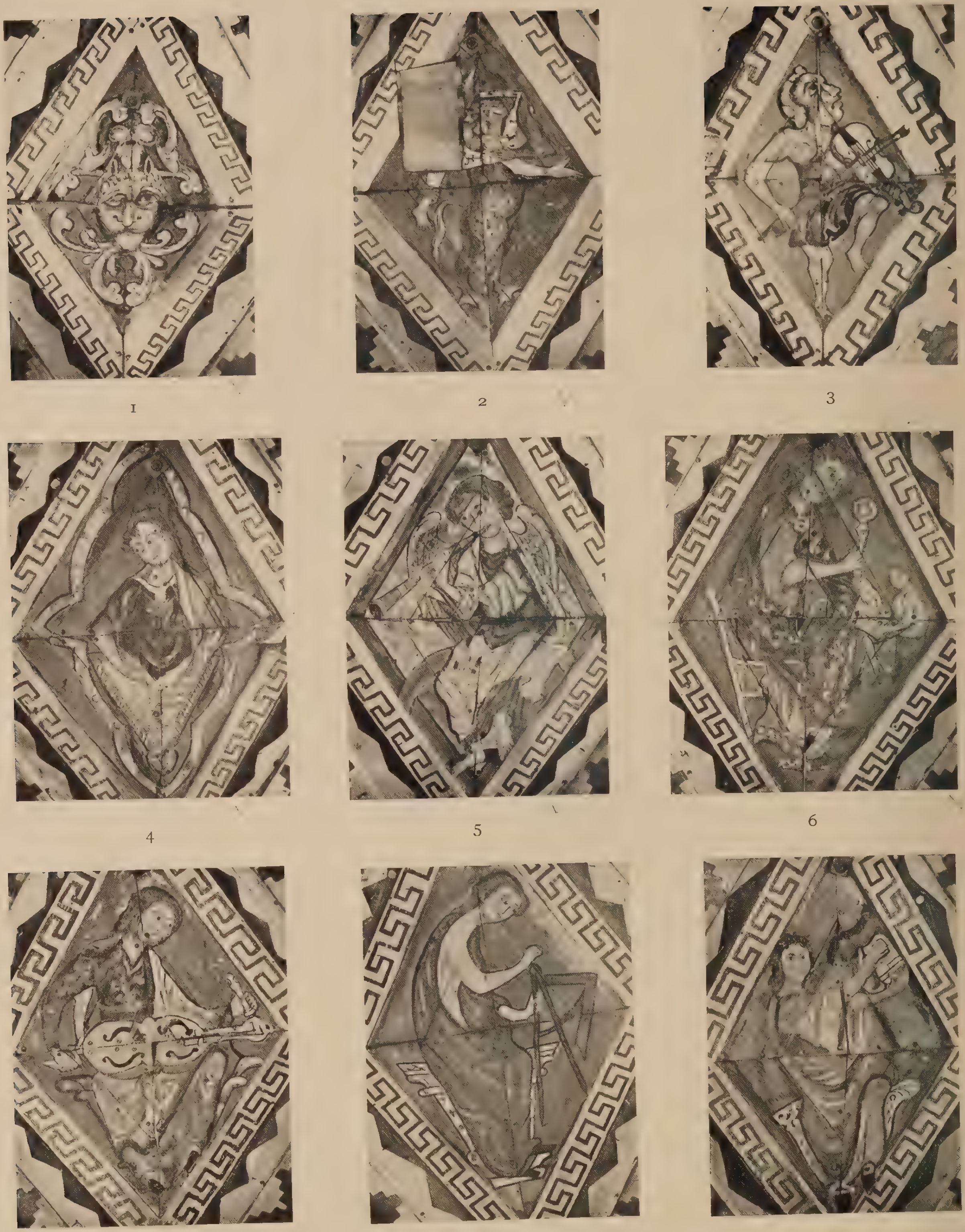

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Details of the ceiling of Peterborough Cathedral

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C 12. A king with a very short sceptre in his left hand; the right hand is pointing upwards with the index finger extended. This figure seems to have been largely repainted; perhaps the hands, the crown, and part of the head may be original painting touched up. The beard and all the clothing must be modern.

C 13. A bishop; there is little to say about this figure except that it has been very largely repainted.

C 14. A king seated in a chair and holding a scroll; very much repainted.

C 15. A bishop holding a book on his left knee; the figure has been heavily repainted, and I should suppose that the dexter side of the figure has been entirely repainted. The lettering on the book is, of course, modern.

C 16. A king seated on a bench holding a sceptre in his left hand; the right hand is slightly raised and is pointing upward with the index finger extended. Some work has been done on this figure, but on the whole it does not seem to have been very much repainted.

C 17. A bishop; the right hand is raised in a very unnatural attitude and is holding a scroll which is hanging in two loops across the figure. This is probably the figure that was entirely repainted in the middle of the eighteenth century as described in Pownall's letter (pl. XCII, 7).[1]

C 18. A king seated on a bench with a sceptre in his right hand (pl. XCII, 8).

C 19. An eagle. Much of this painting must be modern.

C 20. A female figure seated in a four-wheeled chariot with the head and neck of a beast forming the front of it. Only the upper part of the woman is visible; the face and helmet-shaped head-dress look very modern. The left hand is extended and holds a club-shaped object above which is a small crescent-shaped scroll. Pownall[2] gives a picture and a short description of this figure. The picture is extremely unlike the painting as it exists to-day; only one large wheel is shown; the car has no figure-head; the figure is bending forwards, not looking upwards, and has no helmet-shaped head-dress but a veil; she is holding a crescent in her left hand, and the arm is draped and is definitely so described by Pownall; the right arm is bare from the elbow. There has evidently been a great deal of repainting here in the nineteenth century and perhaps in the eighteenth also. The figure is very likely symbolical of the moon (pl. XCII, 9).

N 1. A head with stiff trefoil foliage coming from the mouth and also from the head. As at present seen, the lower foliage comes from under the chin, but there is little doubt that as originally painted it came from the mouth. There are prick ears like those of a horse (pl. XCIII, 1).

N 3. A monster with a semi-human face, human arms coming from the forehead, the body of a beast, perhaps of a horse, with a tail, and webbed feet. In its left hand it is holding a dismembered human arm, the upper part of which is between its teeth; the right hand is holding a human leg. Round the face is something rather like a child's bib with small patterns on it, one of which is a small animal rather like a cat, but it is a question whether these designs are not modern. The upper left-hand part of the painting has a piece of board over it (pl. XCIII, 2).

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[1] *Archaeologia*, ix, 149.

[2] *Loc. cit.*, pl. VII, p. 147.

N 5. A woman in a short skirt coming not quite down to the knees with a very low bodice leaving the breasts bare; she is looking upwards, is playing a violin with a very long bow, and is dancing, that is, she is standing on her right leg, and has her left leg well off the ground and bent sharply at the knee. This is obviously the figure given by Pownall[1] as an animal playing the violin, though he only shows the upper half of the figure. Pownall is not always accurate, and the figure he gives for the violin player is quite unlike what we see to-day. He gives an animal with a snout, and moreover he describes the figure as 'an admirable caricatura of a musician, what the vulgar of this day would call nosey'. It would seem that most of the present figure dates from 1834, and that originally the player was a beast after the style of the figure on a capital in St. Gabriel's chapel in the crypt at Canterbury (pl. XCIII, 3).

N 7. A figure playing a psaltery. The nineteenth-century artist has painted part of the musician's dress across the upper strings of the instrument; Pownall gives the psaltery, which he calls a dulcimer, of the correct shape, and states that the upper edge is next to the player (pl. XCIII, 4).

N 9. An angel seated on a rainbow and blowing a trumpet which is held in both hands. This panel must have been very largely repainted (pl. XCIII, 5).

N 11. A woman seated in a chair, and in front a small seated figure, a child, which as seen now has no visible means of support. The child has a book in front of it, and the woman has her hand on the book; in her other hand she has an object consisting of a long handle with a round, and probably a flat, top; this may be a palmer for administering correction to the palms of children's hands. In our Lindesey psalter is the figure of a monk holding a similar object (pl. XCIII, 6).

N 12. A scroll pattern consisting of stems ending in trefoil leaves (pl. XCIV, 9).

N 13. A figure playing an organistrum; the figure is seated, and is holding the instrument across the knees; the right hand is turning the handle; the organistrum usually has a keyboard along the upper side of the neck, and is played by two people, one of whom turns the handle and the other plays the notes: this style of organistrum is shown in the Lindesey psalter, and also over the doorway to the church of St. James at Compostella, a cast of which can be seen in the Victoria and Albert Museum (pl. XCIII, 7).

N 15. A figure seated on a bench holding a large set-square and a pair of compasses; the figure seems to have been a good deal repainted (pl. XCIII, 8).

N 17. A figure seated on a bench holding up some object in each hand; the object is probably a crot which has been repainted so that the strings are no longer apparent; the whole figure seems to have been much repainted (pl. XCIII, 9).

N 19. A rampant lion; this looks like an heraldic lion rampant of a later date than the early thirteenth century, and it has probably been largely repainted.

S 1. A beast's head with trefoil foliage coming from the nose and from the head; the beast has ears like those of a horse, but they are drooping (pl. XCIV, 1).

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[1] *Loc. cit.*, pl. VII.

S 3. A beast something like a wyvern, with only two legs, with bat's wings and a long scaly body with a turned-up tail which may have had a small head at the tip like a basilisk; the head is that of a beast with prick ears and teeth (pl. XCI, 5).

S 5. An ass standing on its hind legs holding a harp in its fore legs. It has its mouth open, and is no doubt intended to be braying. In the crypt of Canterbury there is a representation of a beast playing a harp (pl. XCIV, 2).

S 7. A figure playing a symphony; the handle is being turned by the right hand, and the left hand is on the keyboard, which is well shown. In spite of some obvious repainting the instrument itself is still probably a fairly accurate representation of the original painting (pl. XCIV, 3).

S 9. A seated figure playing a violin. Very little of this painting can be original, and the violin seems to be of a very modern type.

S 11. A figure seated, perhaps on a rainbow, holding a representation of the tables of the law in the left hand; in the right hand is held what may be meant for a plant or a tree; in the Peterborough psalter in Brussels in the calendar under April a figure is shown holding some plants in its hand with others in the ground; these plants bear a good deal of resemblance to the object in this painting. In the psalter of Peterborough origin in the Fitzwilliam museum are two queens, one of whom holds a similar object. In the Lindesey psalter in our library is a small figure bearing the tables of the law represented exactly as here (pl. XCIV, 4).

S 13. A seated figure holding out the right hand in the attitude of benediction; in front is a small figure, apparently of a monk, standing on a pedestal, and holding up an object that looks like a crocketed finial. The large figure looks now like that of a woman, but it cannot have been meant for such originally or it would not have been shown blessing. Possibly the monk represents a founder, or a builder offering the church to a patron saint (pl. XCIV, 5).

S 15. A figure holding up two objects; in the left hand is a square plate on which are nine roundels; this may possibly be meant for the breastplate of Aaron; in the right hand is what may possibly be a small musical instrument. The figure has been heavily repainted (pl. XCIV, 6).

S 17. A figure seated in a small chariot with two wheels and a figure-head in the shape of a dog. Round the head are leaf-like objects which may originally have been rays of light, and in the left hand is a small bowl with flames coming out of it. The figure is probably meant for the sun (pl. XCIV, 7).

S 18. A ram's head with very curling horns, and with foliage proceeding from the mouth (pl. XCIV, 8).

S 19. A figure holding sprays of foliage with flowers; there is nothing like early thirteenth-century work here, and the design must have been entirely repainted.

A word may be said about the method of photographing. It is the same as has been employed for photographing roof bosses; a lens of 40 in. equivalent focus was used on a quarter plate, and the object was illuminated with a portable electric spotlamp worked from a twelve-volt battery. The exposures needed are of the order of half a minute, even in complete absence of daylight. The method is even more suitable to the photography of paintings than it is for bosses; in the latter case care must be taken not to over-emphasize the shadows, and the exact position of the lamp relative to the camera is sometimes a matter of importance, but this consideration does not come in with paintings. Panchromatic plates or films should always be used for the photography of paintings. In the absence of much daylight the spotlight, which is slightly yellow, has the same effect as a pale yellow filter. C. J. P. C.

II

It is surely no exaggeration to say that, thanks to Mr. Cave's photographs, we are now in a position to do better justice to the paintings of the Peterborough ceiling than at any period during its existence. Not even in the middle ages, soon after they were completed, can it have been possible to judge of them as well as we can now, however good your eyesight and however heroically you may have craned your necks looking up to the ceiling from the floor of the nave. It may, of course, be said that at that time the paintings had not been disfigured by the repainting carried out in the eighteenth century and in 1834; and this brings me to my first point, namely, that, however regrettable that repeated repainting may have been, it is yet remarkable how little it has essentially destroyed the character of style of the paintings. The very coarseness and brutality of the repainting, as it were, defeat their own object: to take a flagrant case like that of the archbishop, C 11 (pl. XCII, 6), how easy it is to abstract from the rank absurdity of the inscriptions of 1834 and of all the other daubing that went with them; how little difficulty there is in recognizing the authentic medieval design which underlies it all! The silhouette, the design of drapery, the ornamentation, the drawing and modelling—in varying degree the original features are quite unmistakably present. And, as I said, I am here referring to a figure which has suffered a very great deal.

The fact that the characteristics of style thus remain so essentially unobscured is, of course, of utmost value for the solving of the all-important question of the date of the ceiling painting. And on the evidence of style thus supplied I feel it is impossible to place these paintings at a date which is very far advanced into the thirteenth century. Certain motifs of ornamentation would indeed not be incompatible with the late-twelfth-century date: Sir Charles Peers, in his brief note on this ceiling in the *Victoria County History*,[1] has pointed out that the stepped chevron pattern occurs as a masonry decoration in Tickencote

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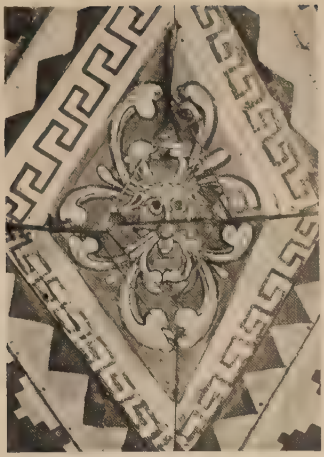
[1] *V.C.H. Northamptonshire*, ii (1906), 446.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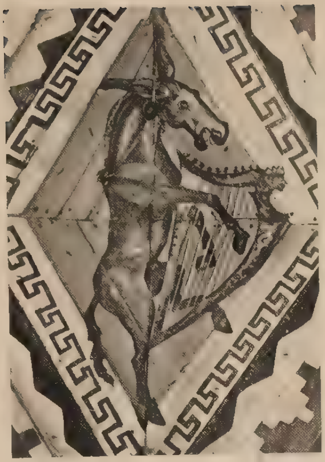
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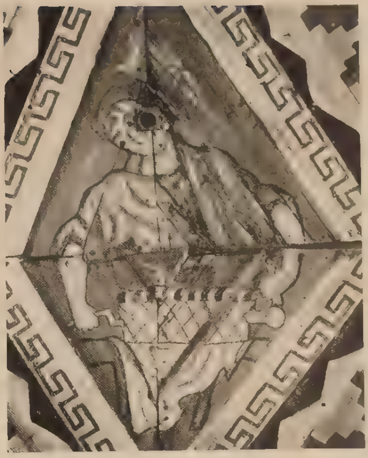
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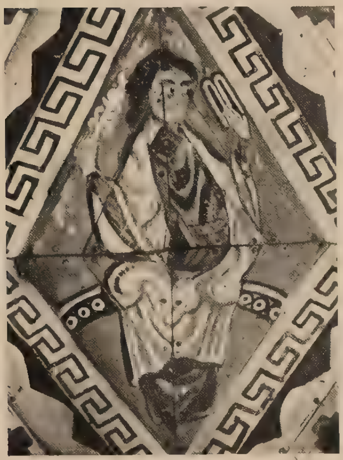
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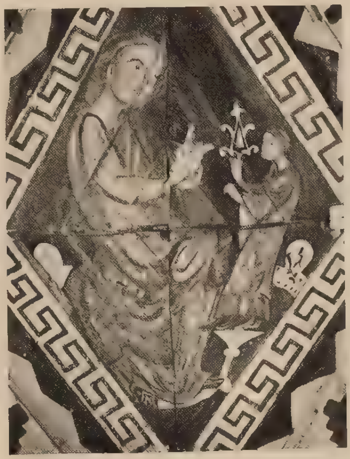
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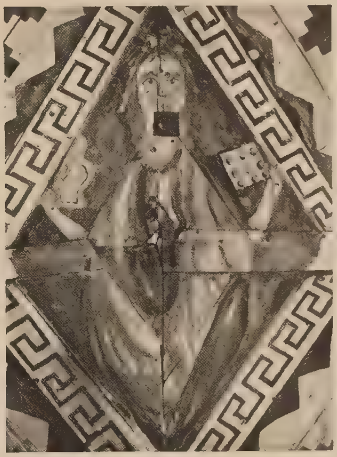
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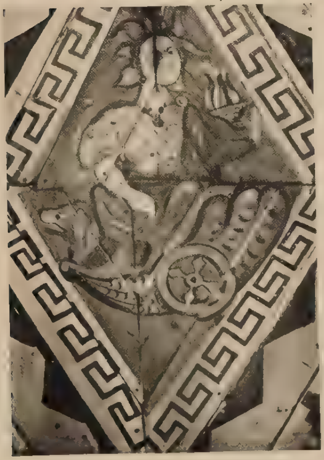
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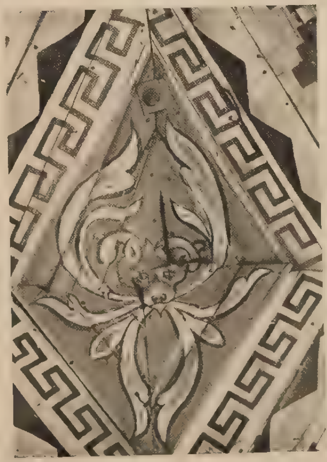
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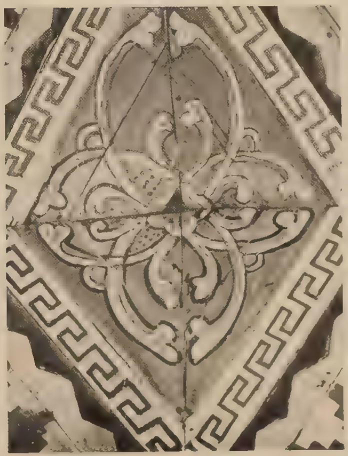
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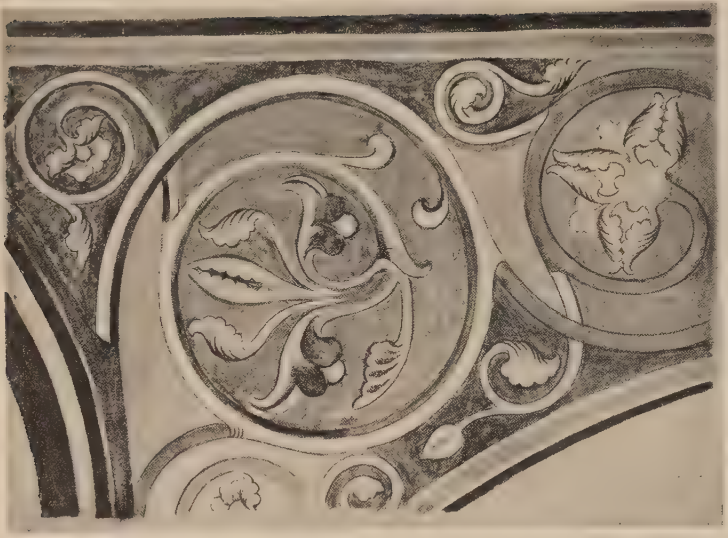
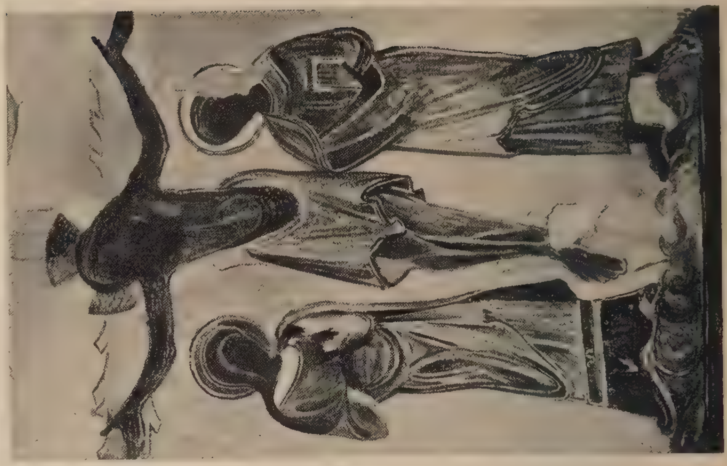
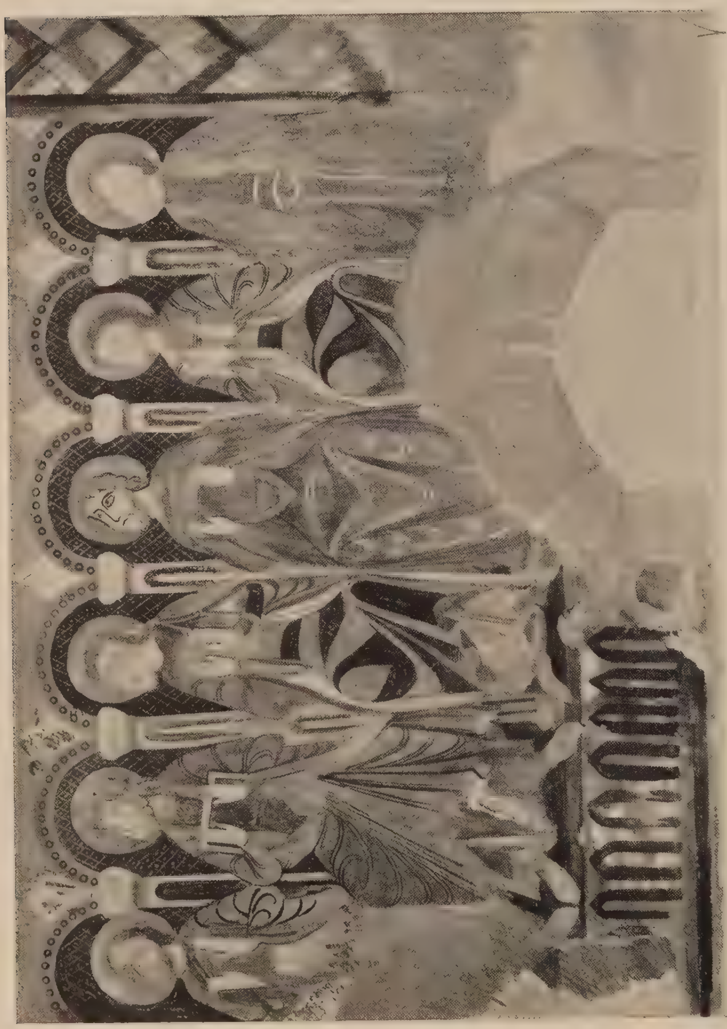
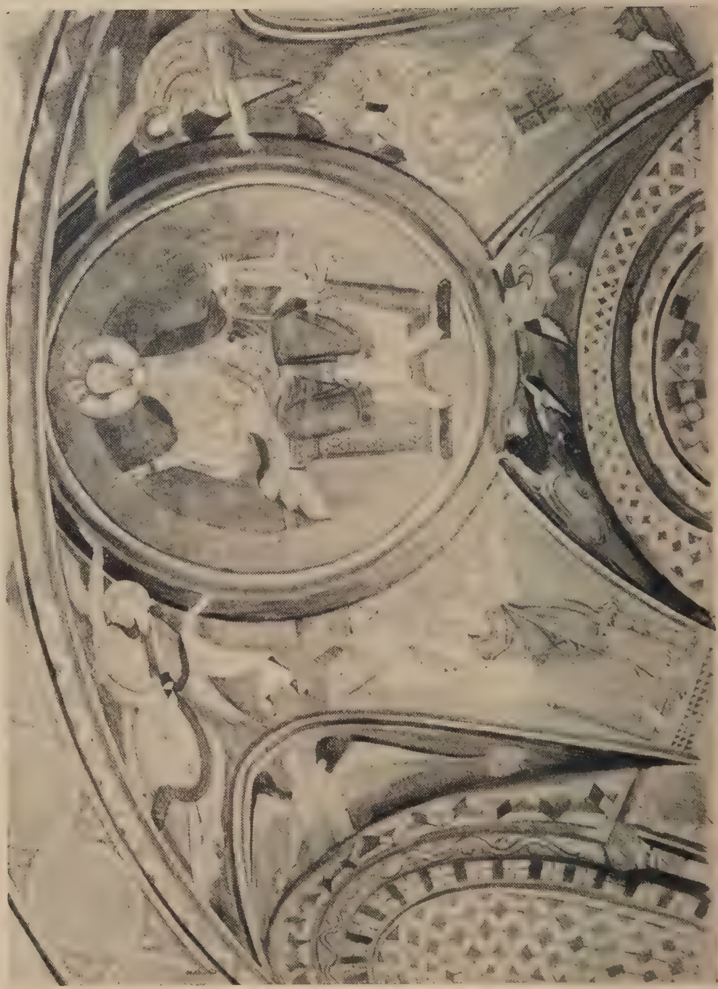


3. Painted ornament, Ely Cathedral (*c.* 1200)





1. Wall-painting, church of Kempley, Glos. (Late 12th century)



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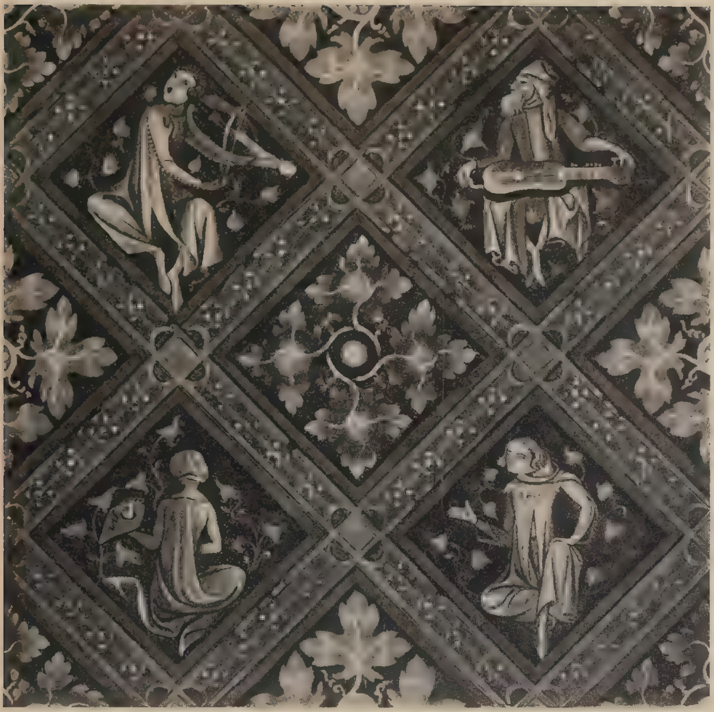
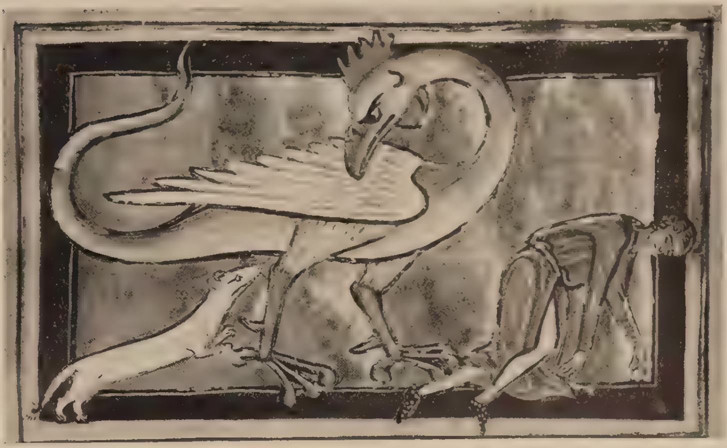
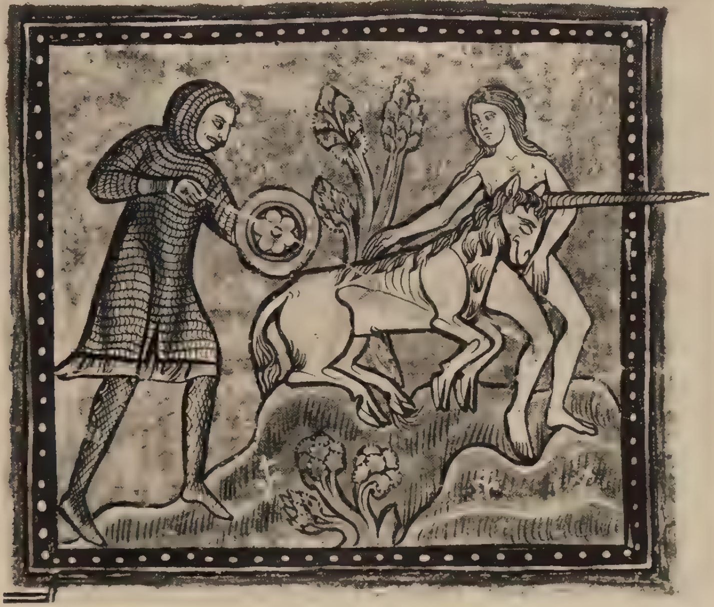


1. Detail of wall-paintings, choir of Cologne Cathedral, *c.* 1325-50



2. The Basilisk (British Museum)
Royal MS., 12. C. XIX (Late 12th century)



3. The Unicorn (British Museum)
Royal MS., 12. F XIII (Early 13th century)

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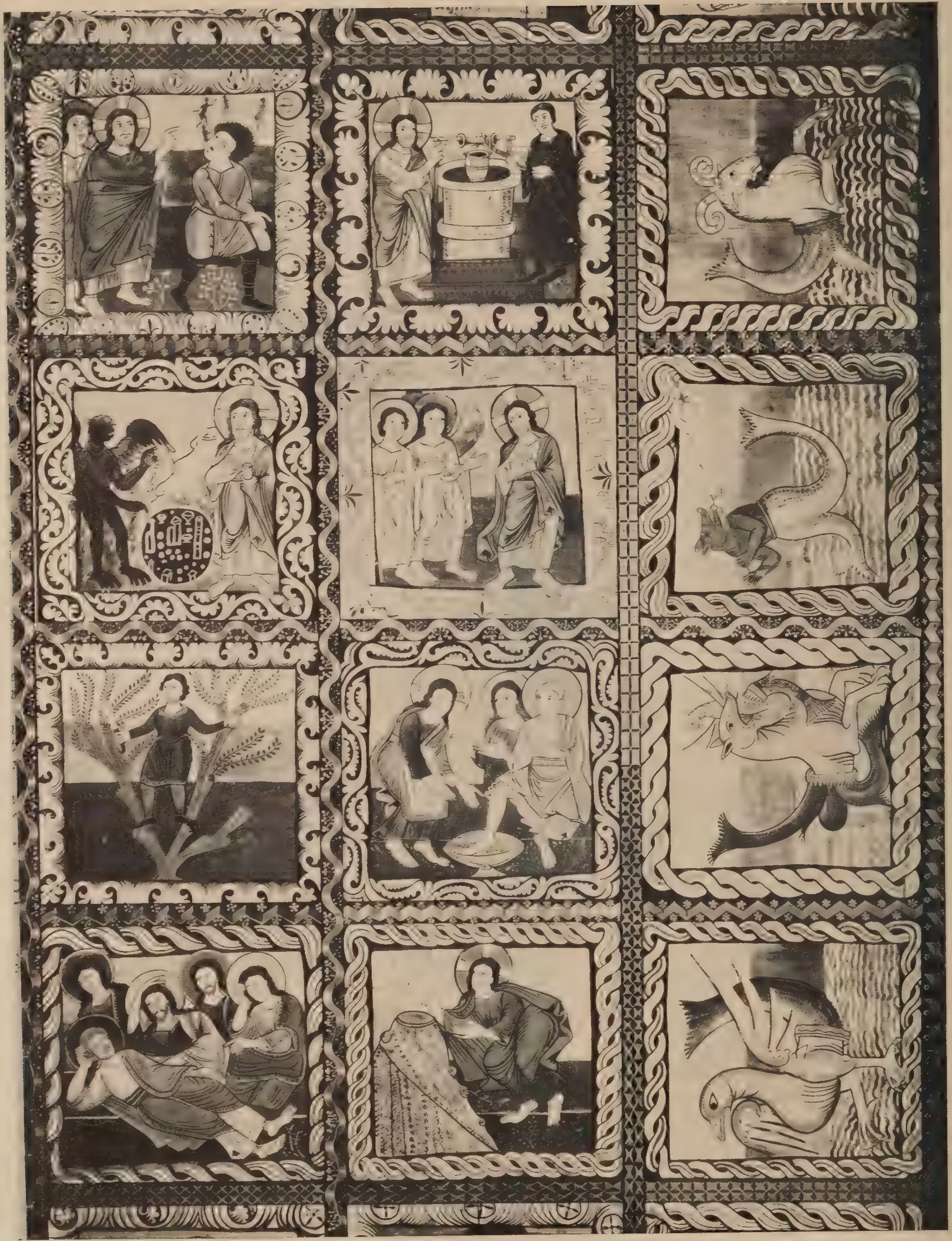

Photo. Schweizerisches Landesmuseum, Zürich

Detail of painted wooden ceiling of the Church of Zillis (Grisons) (*c.* 1150)

Published by the Society of Antiquaries of London, 1938

church in Rutland and elsewhere in the late twelfth century. But if you take a piece of scroll design in one of the diamond-shaped divisions, such as N 12 (pl. XCIV, 9), I think it will be felt very definitely that here is an early-thirteenth-century design: bearing in mind the fact that the shape of the panel has more or less forced the artist to adopt a symmetrical design, I think there is extraordinarily close affinity to such a detail of ornamentation on the vaulting of the south aisle of the nave of Ely Cathedral as the one here reproduced, which may be dated about 1200 (pl. XCV, 3). The resemblance to the ornamental motifs occurring on the back of enamelled Limoges caskets of the early thirteenth century is perhaps also worth noting—all the more so as in many of these we also have a parallel to the diaper design of the whole space. Again, when it is a question of all these seated figures, I think one feels well beyond the stage indicated in the history of English medieval wall painting by the row of seated apostles at Kempley, dating from the second half of the twelfth century (pl. XCV, 1) and even perhaps beyond the stage of the seated figures in the ceiling decorations at Copford in Essex which are still later in the twelfth century (pl. XCV, 2), though here I feel we are getting rather near to the Peterborough stage. Reading the pictorial palimpsest presented by all these figures at Peterborough, I should say that a wall painting of the Crucifixion at St. Albans is perhaps nearest to them (pl. XCV, 4); and this dates from about 1220. Finally, the series of Bestiary subjects which at Peterborough presents such splendid examples as S 3 (pl. XCI, 5), C 6 (pl. XCI, 4), and S 5 (pl. XCIV, 2), I feel gets us also fairly close to the phase of style denoted by Royal MS. 12 C XIX and Royal MS. 12 F XIII, from Rochester Priory, both in the British Museum (pl. XCVI, 2 and 3) which may be dated, respectively, very late in the twelfth or quite early in the thirteenth century.[1]

If then we may feel fairly safe in assigning an early-thirteenth-century date—say *c.* 1200–20—to the paintings on the Peterborough ceiling, the next question which presents itself is—What other painted wooden ceilings of more or less equally early date do there exist? The answer is a simple one: there is none in England and, search as we may, throughout the length and breadth of Europe there are only three others that can be instanced as surviving examples—one in Switzerland, one in Germany, and one in Sweden.

Of these, the one in Switzerland, long neglected by art historians, has lately been studied with admirable thoroughness by Dr. Gantner.[2] This ceiling exists in the church of Zillis in the Grisons, and is nowadays dated about 1150; the room which it covers measures about 55¾ by 29½ ft. The scheme of decoration here comprises no fewer than 153 square compartments, the great majority of which set out the story of Christ; apart from a number of single figures there then also occur some panels along the borders of the ceiling containing fabulous monsters and subjects of the type known as *drôleries*—and here the affinity as regards invention to the Peterborough ceiling leaps, of course, to the eye (pl. xcvii).[1] What we see in both places so strikingly evidenced is that strange world of whimsical fantastic conceits against which, as Dr. Gantner has reminded us, St. Bernard of Clairvaux inveighed so vehemently—and so unsuccessfully—in the twelfth century: *immundae simiae*, *feri leones*, *monstruosi centauri*, *semihomines*, *maculosae tigrides*. A complete key to the symbolical meaning of the Peterborough ceiling has not yet been worked out, though it should be possible to arrive at it; a collation with the subjects at Zillis is very likely to be of considerable help in this connexion and attention might also be paid to the cognate subjects among the fourteenth-century paintings on the walls of the *Salone* at Padua.

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[1] See the *Burlington Magazine*, xxxv (September, 1919), p. 100.

[2] My attention to this ceiling was first drawn by Dr. N. Pevsner. Early publications of it include two by J. Rudolph Rahn in the *Mittheilungen der Antiquarischen Gesellschaft in Zürich*, Bd. xvii, Hft. 6, 1872, and in *Repertorium für Kunstwissenschaft*, v, 1881, 406–9, and one by Carl Brun in *Mittheilungen der Schweizer. Gesellschaft zur Erhaltung historischer Kunstdenkmäler*, 1887. For Dr. Gantner's discussion of this subject, see his book *Kunstgeschichte der Schweiz*, i, 1936, pp. 262–73.

Proceeding in order of time, we next come to the example provided by Germany. This is by far the best known of the whole category, and a very imposing affair it is, though its 90 by 28 feet make it, as far as mere size goes, shrink into relative insignificance by comparison with the 204½ by 35 feet of the Peterborough ceiling. The German example, which dates from about 1200, is provided by the church of St. Michael at Hildesheim and is here illustrated from a photograph kindly supplied by Dr. Arthur Watson, F.S.A. (pl. xcviii). In contradistinction to Peterborough, where the underlying scheme of thought and symbolism is difficult to grasp in all its details, the ceiling at Hildesheim is governed by one main idea of religious symbolism easily and immediately taken in: it is pre-eminently a Tree of Jesse, this incident occupying six of the main compartments in the centre—Jesse in the second compartment, the tree trunk continued in the five compartments above, of which four contain kings and the topmost the Virgin; for the rest there is—apart from the scene of the Temptation at the bottom and the (modern) figure of Christ at the top—a profusion of single-figure subjects more or less related to the main subject—ancestors of Christ, prophets, etc. It will be noticed that the lozenge motif which is omnipresent at Peterborough occurs here too, but very sparingly—three times in the Tree of Jesse and only in alternation with the motif of the quadrilobe.

From this we may turn to the Swedish example which occurs in a little

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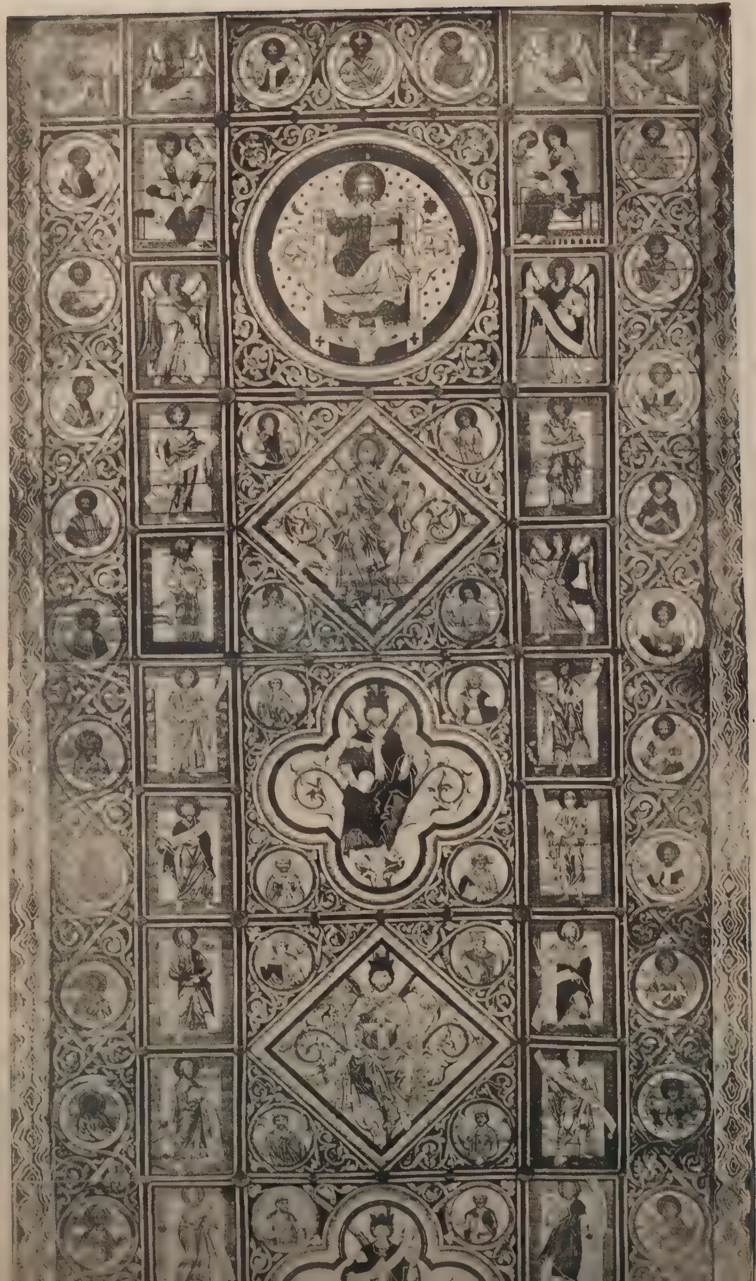
[1] I have to thank my friend Dr. R. F. Burckhardt for so kindly obtaining for me the photograph from which the reproduction is made. The presence of the 'stepped chevron pattern' (see above, p. 304) will be noticed in the borders of one of the compartments at Zillis.



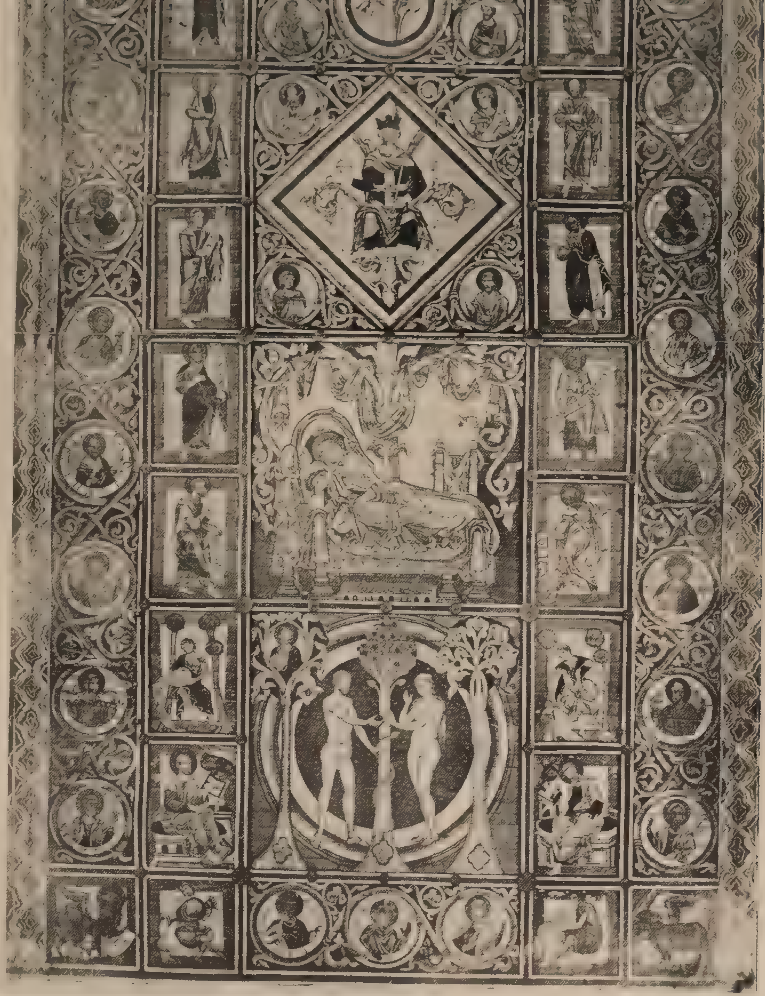


Photo. Boedeker.

The Hildesheim Ceiling (*c.* 1200)

By permission of Dr. Arthur Watson and the Oxford University Press

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church in the province of Småland, in the south of Sweden, the name of the locality being Dädesjö. It is of correspondingly modest dimensions, measuring only 36 by 24½ ft. (pl. XCIX). These paintings may be dated about 1275, so while still belonging to the thirteenth century they are considerably later than those at Hildesheim and Peterborough, not to mention those at Zillis. As to the scheme of decoration, it will be seen that it consists exclusively of a series of medallions grouped four and four and connected by motifs of ornamental design, each medallion containing a scene from the life of Christ; and at the summit of the scheme, a frieze of smaller medallions, three and three, contains half-length figures of angels. Except in the very general sense that the design is governed by the repetition of one geometrical figure—in this case the circle—it will be seen that there is here no relation at all to the Peterborough ceiling; and yet a connexion with England is most definitely present in this case since, as Professor Tristram has shown,[1] the late-thirteenth-century decoration of the main part of the wall space in the chancel of the little Norman church of Brook in Kent is carried out in exactly the same fashion, the deduction being that the Dädesjö ceiling in all probability was based upon models supplied by some English illuminated manuscripts.

Now four examples of twelfth- and thirteenth-century painted wooden ceilings surviving in places as widely apart as Zillis, Peterborough, Hildesheim, and Dädesjö, must obviously be the the merest fraction of a wealth of material which once existed.[2] Deductions as regards affiliation are therefore nowadays peculiarly difficult; and I would, in the circumstances, like to call attention to the existence of rather a notable parallel to the Peterborough paintings, though not on a ceiling, in Germany.

The paintings in question are to be found on the walls of the choir of Cologne Cathedral and fortunately escaped the whitewashing which in the eighteenth century was so extensively practised in the churches of Cologne, owing to the fact that between 1688 and 1842 they were concealed by enormous tapestries. In 1926 they were judiciously cleaned and now illustrate in the most interesting fashion a phase in the history of Cologne painting which began after 1322, the year of the completion and consecration of Cologne Cathedral. They are painted in tempera on a ground of gesso on the walls behind the choir stalls and consist of a main range of figure subjects on a large scale in architectural settings and, predella fashion, underneath it figure subjects on a smaller scale.

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[1] See the *Burlington Magazine*, xxxi (September, 1917), pp. 111 *et seq.*

[2] For the sake of completeness, reference may here be made to some minor examples enumerated by Dr. Gantner (*op. cit.*, p. 270): (1) fragment of a wooden ceiling with three scenes from the Passion, formerly in the cemetery chapel at Balingen, now in the Schloss Museum at Stuttgart; (2) small fragment of a scroll motif, from the Münster at Constance; (3) fragments of allegorical figures, Metz Museum.

Now the background of these smaller figure subjects is covered with decorative paintings in monochrome of which I here reproduce a detail (pl. XCVI, I).[1] It will be seen that we have here a network of lozenges in which ornamental motifs alternate with *drôleries*. The general affinity of this scheme to the one at Peterborough and the parallels afforded by several of the individual figures cannot be in doubt. The date in the second quarter of the fourteenth century assignable to these paintings is also of value as affording further confirmation, should any be needed, of the early-thirteenth-century date of the Peterborough paintings.

The mere fact of this parallel is interesting enough; but there is perhaps rather more to it. In the opinion of Dr. Paul Clemen, the foremost authority on the art of medieval Cologne, the paintings in the choir of Cologne Cathedral are the earliest instances known of an influence *upon* Cologne painting of English painting. Among the clues which Dr. Clemen considers indicate an English influence upon Cologne painting he mentions in the first place the analogies which the choir-stall paintings exhibit to one of the earliest of the great English psalters of about 1300—the 'Peterborough psalter' now in the Royal Library at Brussels, illuminated for, and in all probability at, Peterborough; and, as Mr. Cave has recalled, the late Dr. James pointed out that the illuminations of the Peterborough psalter very probably contain copies of the paintings which formerly existed on the back of the Sedilia of Peterborough Cathedral. Under these circumstances, the analogies which exist between the unusual diaper backgrounds of the Cologne choir-stall paintings and the Peterborough ceiling cannot fail to assume rather a special significance, suggesting indeed a definite current of artistic influence moving from Peterborough to Cologne. How exactly that influence came to be exercised, I would not venture at this stage to conjecture: but it will be seen from this instance alone what far-reaching historical perspectives are opened up by a consideration of the style of the Peterborough ceiling.

Some years ago it fell to my lot to review a book by a well-known Scandinavian art historian, embodying lectures which he had delivered at Princeton University in 1929. In treating of the Dädesjö ceiling the author committed himself to the following statement: 'Dädesjö has the only painted church ceiling of the thirteenth century in Sweden, and except at St. Michael in Hildesheim there is in the whole of Europe no other painted ceiling of the thirteenth century preserved.' I must say I felt it rather an extraordinary claim to make, seeing that this Society as far back as 1789 had published a paper with drawings of some details of the Peterborough ceiling—a paper with which the present paper links up with singular appropriateness across the intervening century and a half; and seeing also that Thomas Strickland about the middle of the last

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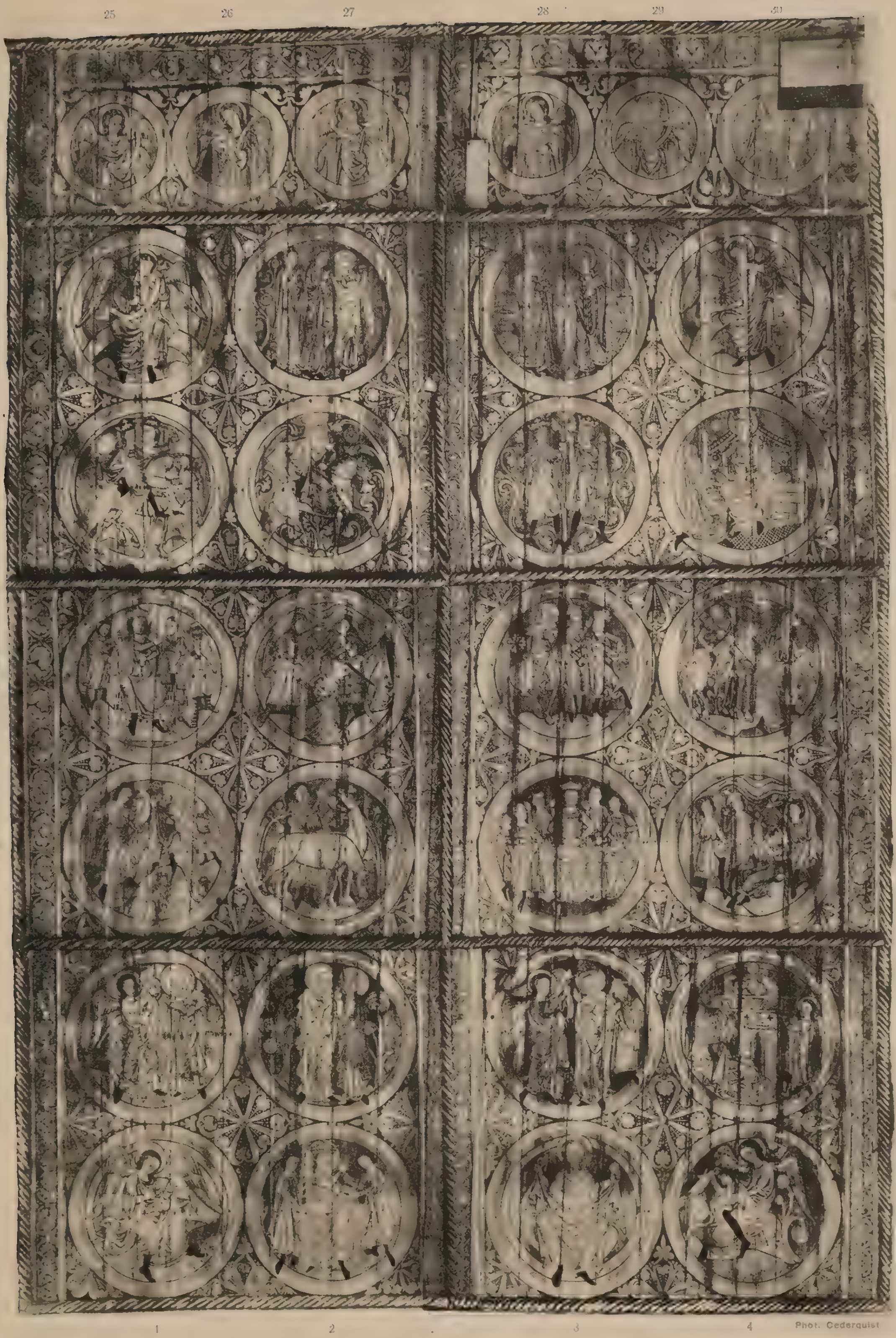
[1] My best thanks are due to Dr. Paul Clemen, Hon. F.S.A., for enabling me to do so.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Phot. Cederquist

Painted wooden ceiling of the church of Dädesjö, Sweden (*c.* 1275)
(Reproduced from A. Lindblom, *La peinture gothique en Suède et en Norvège*, Stockholm, 1916)
Published by the Society of Antiquaries of London, 1938

century brought out his very elaborate lithographic reproduction of the Peterborough ceiling from which Westlake was able to borrow a reproduction for his *Historyof Design in Mural Painting* (1905)—not to mention other references to the Peterborough ceiling in art literature.[1] Still, a gratuitous error like that is valuable as a symptom of the fact that the Peterborough ceiling has so far not received anything like the notice which it demands on the part of art historians. Mr. Cave's admirable photographs represent a first step towards putting the Peterborough ceiling into its proper perspective. But I should like to go farther and say that a removal of the disfiguring repaints with which it was covered in the eighteenth and nineteenth centuries has become a matter of definite importance and urgency. This marvellous example of English medieval painting having mercifully come down to our age unharmed by fire or wilful destruction, is it not incumbent upon us to restore it to its pristine condition—seeing that we now do know how to deal with problems of this kind? And I suppose the thoughts of all of us go instinctively to the man who could do it better than anyone else, Professor Tristram. That the indispensable sympathy and co-operation of the Peterborough Cathedral Restoration Committee would be available for an enterprise of this nature, I have every confidence. An examination of Mr. Cave's material has convinced me that it would be possible to recover the Peterborough ceiling in something approaching its original state; no doubt working for a view from a considerable distance, the medieval artists went in for rather a simplified treatment, but that was of course the proper thing to do and does not in the least affect the essential artistic significance of the work; and I feel I could not put forward this plea under happier auspices than when addressing a Society which in the far-off days of the eighteenth century first called attention to the interest of a ceiling which unquestionably must rank among the most important examples of medieval art surviving in the whole of Europe. T. B.

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[1] Compare, for instance, among later references, A. W. Clapham, *English Romanesque Architecture after the Conquest*, Oxford, 1934, p. 148 and pl. 46.

X.—*A Further Account of the Armour preserved in the Sanctuary of the Madonna delle Grazie near Mantua*

By James G. Mann, *Esq., M.A., F.S.A.*

Read 10th March 1938

On the 27th February 1930[1] I gave to this Society a preliminary account of the armour which had for centuries passed unrecognized in the Sanctuary church of the Madonna delle Grazie near Mantua. My observations on that occasion were based on notes made from the top of a ladder, and the illustrations were from photographs of the figures taken *in situ* in the niches of the gallery which runs round the nave of the church. The true appearance of the armour was at that time concealed under a thick coating of paint and accumulated layers of dust. Component parts of individual suits were distributed among different figures, often quite incongruously and mixed with supplementary parts supplied in *papier mâché*. The neglected and shambling appearance of the figures went far to explain why the true character of the armour that clothed them had not previously been realized. In summing up I ventured to predict that 'if the armour at Grazie were cleaned and well set up, it would present a very different appearance from what it does at present, and would almost certainly reveal some interesting armourers' marks. Nine of the seventeen suits include Gothic pieces, in some cases virtually complete.'

I am now able to present a more detailed report on the armour as a result of a thorough examination which has fully justified this assertion. This has been made possible through the wholehearted assistance rendered by His Excellency Monsignor Domenico Menna, who had in the meantime succeeded Monsignor Guarnieri as bishop of Mantua. On learning of my previous account, the new bishop had one of the armours dismounted, and tests made by scraping portions of the paint. These revealed the presence of a number of armourers' marks. The bishop at once communicated with me, and in September 1937 I went out again to Mantua at his invitation and supervised the dismounting of the seventeen figures that wear armour. The photographs here reproduced have been selected from a total of over two hundred of details and separate pieces which the bishop of Mantua generously had taken at his expense in order to assist my studies.

The appearance of this ragged regiment with their wooden plumes and swords, as they stood in a row after being brought down from the galleries of the nave, but before being dismantled, can be gathered from pl. C. The armour was first removed from the dummies, which were then shown to be not lay figures, but merely a frame made of untrimmed poles with the addition of a face, two hands, and two feet moulded from *papier mâché.*

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[1] Printed in *Archaeologia*, lxxx, 1930, pp. 117–42, 'The Sanctuary of the Madonna delle Grazie, with notes on Italian armour of the fifteenth century'.

The armour was then boiled piece by piece in a cauldron in the yard of the monastery. This may sound to some to be a strange treatment for armour, but it is the most effective way of removing stiff coatings of oil paint and dirt without harming the metal, and is one familiar to those with experience of the conservation of armour. It avoids any risk of scratching and erosion which may result from frictional cleaning or the evil effects of the use of acids. The armour in many collections has been ruined by over-cleaning; etched decoration, gilding, and even armourers' marks having been effaced by thoughtless friction, and the form and set of the plates altered by re-strapping.

When the various parts were taken from their bath and carefully dried, a large number of marks characteristic of the Milanese armourers of the fifteenth century were revealed, amounting to thirty-nine in all. The armour was then sorted out, and crude fastenings of iron wire, cramps, and rivets, which had been used to fix the armour together on the dummies, were removed. With the help of a smith and a saddler from Mantua, the armour was remounted in a manner more in keeping with its former state. Original rivets were in every case retained where they existed, and only a minimum of necessary repairs was made. Bent plates were straightened out and missing straps and buckles replaced. With one minor exception on no. 15 no new plates have been added to supplement the old. The layers of paint had in most cases prevented deep corrosion of the metal, but no attempt was made at this stage to remove the rust which disfigures many of the pieces.[1] This has been left until more experienced help is forthcoming. In the meantime the armour has been greased with vaseline to prevent further oxidization. Later it is to be hoped that with judicious cleaning the rust may be removed and that the metal will then recover that dark, lustrous appearance which is the special property of Milanese armour of the best period.

The first principle in sorting the armour was to place together those pieces of contemporary date, and especially those which bear the same armourer's mark. The reassembling of the armour has resulted in the formation of six complete figures of Gothic armour of the fifteenth century, one fluted armour, lacking its helmet, six miscellaneous half-armours of the first half of the sixteenth century, and three of the second half. In the absence of suitable mountings,

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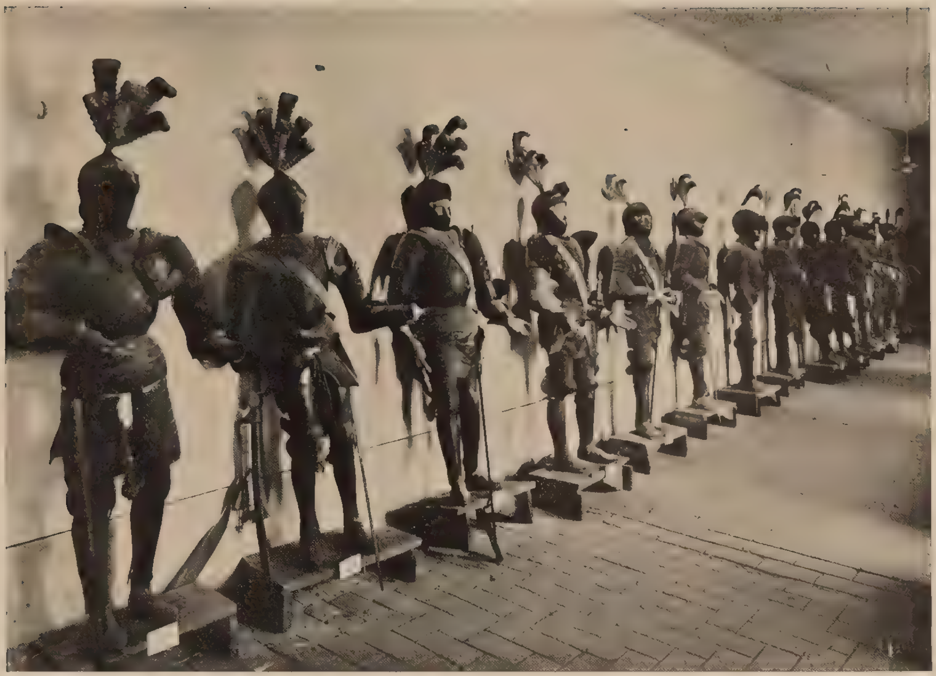
[1] It should be explained that the lighter bands along the edges of plates, as seen in several of the photographs, do not represent brass borders. They are the consequence of the armour having been painted black with yellow edges, and the yellow paint having proved to be a better preservative than the black.



1. The seventeen armoured dummies after removal from the gallery of the church and before treatment, September 1937

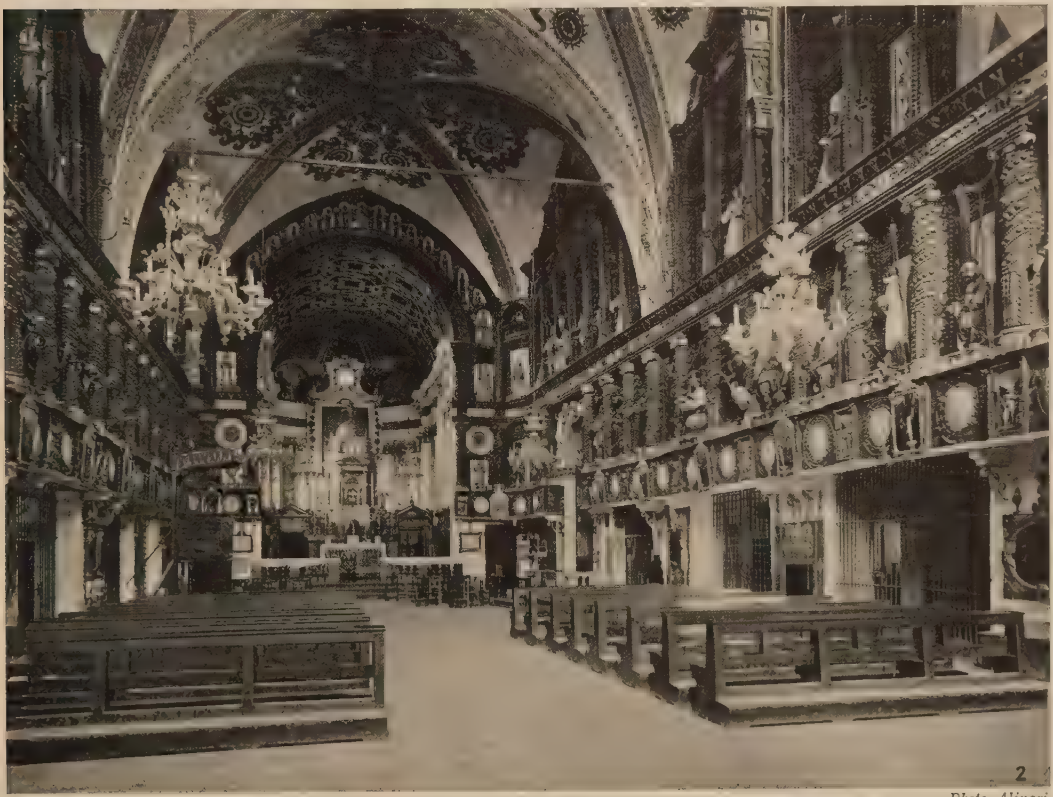


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Photo. Alinari

2. The interior of the Sanctuary Church of the Madonna delle Grazie with the figures in the galleries before removal

Published by the Society of Antiquaries of London, 1938

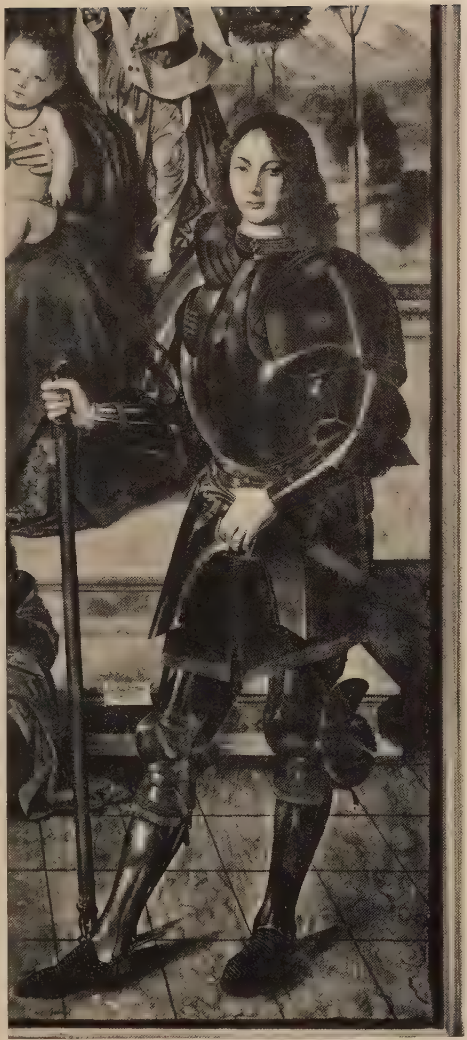
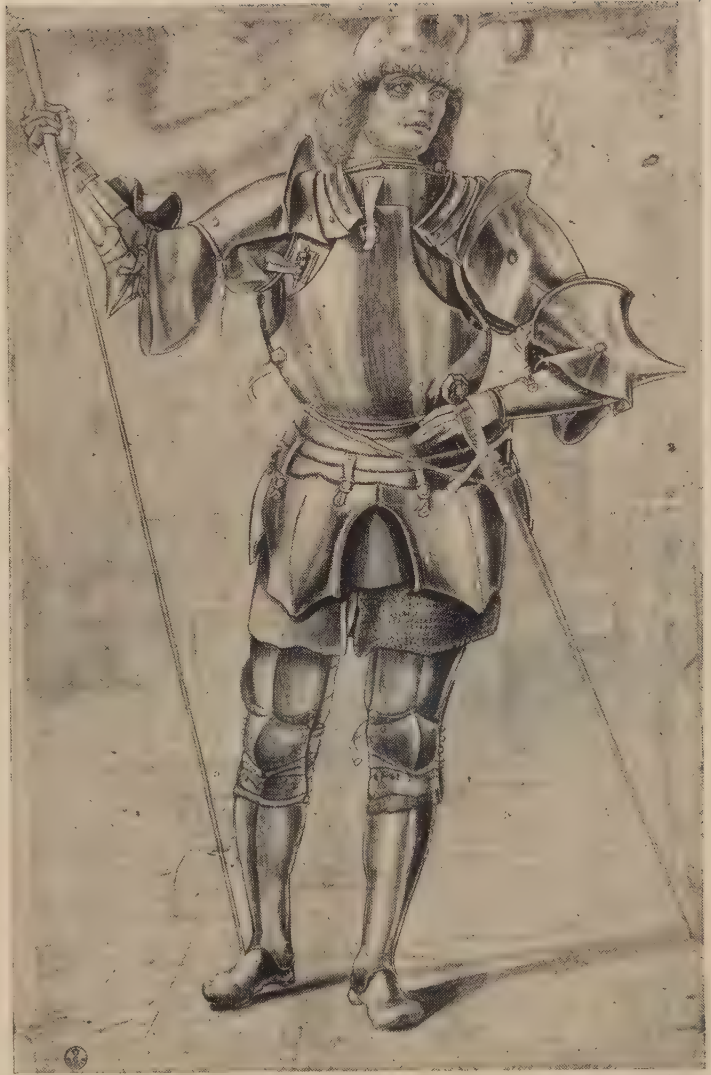


Photo. Alinari

1. St. Florian, detail from the painting of the Madonna and Child by Francesco and Bernardino Zaganelli, called Cotignola, dated 1499. Milan, Brera



Fototeca Italiana-Firenze

2. Study of a man in armour, ascribed to Alvise Vivarini, between 1477 and 1484. Florence, Uffizi

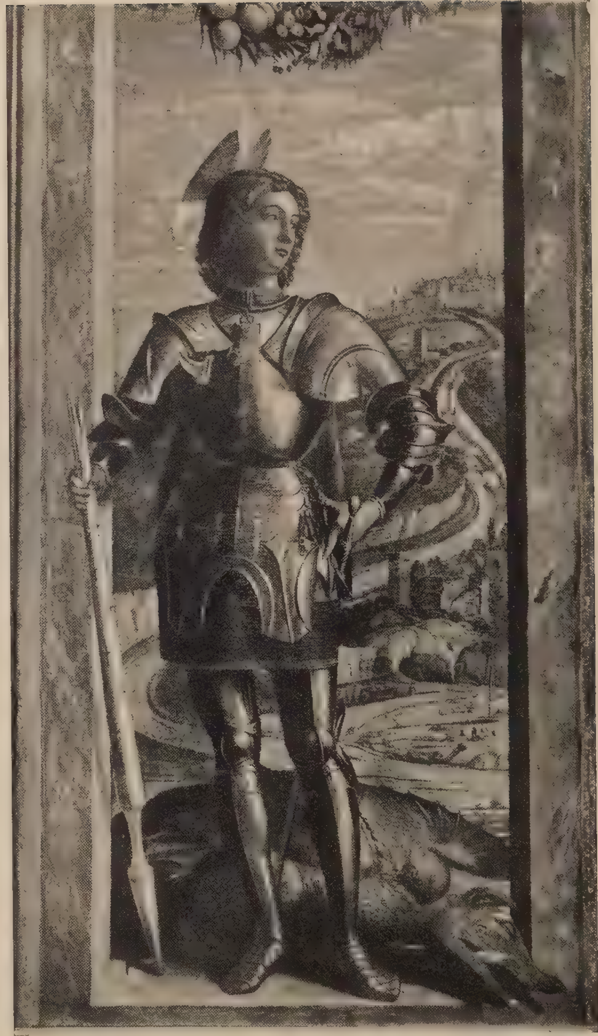


Photo. Hanfstaengl

3. St. George, painted by Andrea Mantegna, between 1459 and 1462. Venice, Accademia

Published by the Society of Antiquaries of London, 1938

the six fifteenth-century armours have been photographed upon a living figure. The first of the fifteenth-century armours was exhibited in the Mostra Iconografica Gonzaghesca during the summer of 1937 in the Palazzo Ducale at Mantua, and three of them (nos. 1–3) were lent to the Mostra delle Armi Antiche held at Florence in 1938. The armour has now been moved from the church to a room in the conventual buildings of the Sanctuary where it is under the care of Father Erminio Carra.

Description of the Six Fifteenth-century Armours as now Mounted

1. This (pl. CII) alone of the original figures remains virtually unaltered, for all its parts belonged to the fifteenth century and only the tassets have been exchanged. As placed in the church, it was the second figure in the gallery and used to be known as the Marquess Federigo II Gonzaga (1519–40).[1] It was during his reign that the scheme of transforming the nave with galleries, ornamented with wax decoration and peopled with dummies, was undertaken by one of the friars, Francesco d'Aquanegra. As already noted in my earlier account, this armour belongs to a generation previous to this and dates from before 1500.

It consists of a solidly built *armet à rondelle* (pls. CVIII, 6, CIX, 1–3) which retains its buff or wrapper. This was found bent up and forced inside the bevor. It has since been straightened out and strapped in its proper position covering the lower part of the helmet in front. The armet has a keeled ridge over the skull, cusped reinforcing plate on the brow, and strongly turned-over borders. The cheek-pieces are deep, concealing much of the lower part of the face, and a U-shaped vent has been cut out in front opposite the mouth (pl. CIX, 2). The rivet-heads of the hinges at the sides are flat and stamped with a rosette pattern of a kind frequently found on Milanese armour of this date, and which constantly recurs on the armour here (fig. 1).[2]

The breastplate (pl. CXI, 1, 3) is in two parts. The under one is forged in one piece, covering the whole of the breast but stopping short of the waist; it has the borders turned strongly outwards. A lance-rest is bolted to the right side. Over it is a reinforcing breast of unusual size. It is of greater extent than the true breast beneath it, as it reaches to the waist, where the lower edge is bent outwards to carry the skirt of lames. It is really an enlarged placate or lower breast-plate. Just such a superimposed breast can be seen on the figure of St. George in the painting of the Virgin and Child and Saints by Francesco Bonsignore in the church of S. Bernardino at Verona dated 1488, and Ercole Grandi's altar-piece in the National Gallery. It fits closely inside the turnover of the neck and left armpit of the breast proper and is scooped out on the right side to accommodate the lance-rest. Two buckles are placed one on each side for the straps to hold it in place, and two other straps were riveted to the sides above the waist-line. It carries four lames of a skirt, on the third of which are two pairs of flat, rosette-headed rivets to hold the straps supporting the tassets. These are shaped to a point and ridged in the centre, with the inner edges flanged. There is a rectangular brayette of mail. The backplate (pl. CXI, 2) is built up of one large plate and three acutely pointed and cusped plates overlapping upwards. Two buckles are riveted on the shoulders and two at the sides. The lower backplate which carried the culet is missing. No marks are discernible on the two breasts, backplate, or tassets. The pauldrons are of the ample Italian form, extending far behind over the shoulder-blades. That for the left (pl. CXV, 2, 3) has a reinforcing plate in front with its upper edge bent forwards and stamped with a triple Milanese mark (fig. 3). The pauldron proper is built up of four lames, the third being the largest, and stamped with the same triple mark. The lowest one is strongly turned over where it encloses the upper arm. The right shoulder leaves the armpit free, and is built up of five lames extending to the middle of the back. Its reinforcing plate is missing. The left vambrace (pl. CXIX, 2), by which is meant the whole arm below the shoulder, which was the old meaning of the term,[1] consists of an upper cannon nearly enclosing the arm, a small articulated couter, with one upper and two lower lames, over which is riveted a large reinforcing elbow-guard of fine form bearing a mark (fig. 22). It is these large butterfly-like left elbows which give so bold a character to Italian armours of this time. The well-modelled lower cannon is formed of two parts hinged together and fastened by a buckle and strap near the wrist. The right arm (pl. CXIX, 1) consists of upper cannon, a sharply pointed articulated couter with a finely shaped tendon-protector with its upper half reinforced, and a lower cannon similar to that of the left arm. Both arms are stamped with a triple mark (fig. 22). The gauntlets (pl. CXXI, 1) have long, pointed cuffs; the back of the right hand is protected by a separate plate and the fingers by two lames, while the left gauntlet is made in one piece except for a single separate plate covering the fingers.

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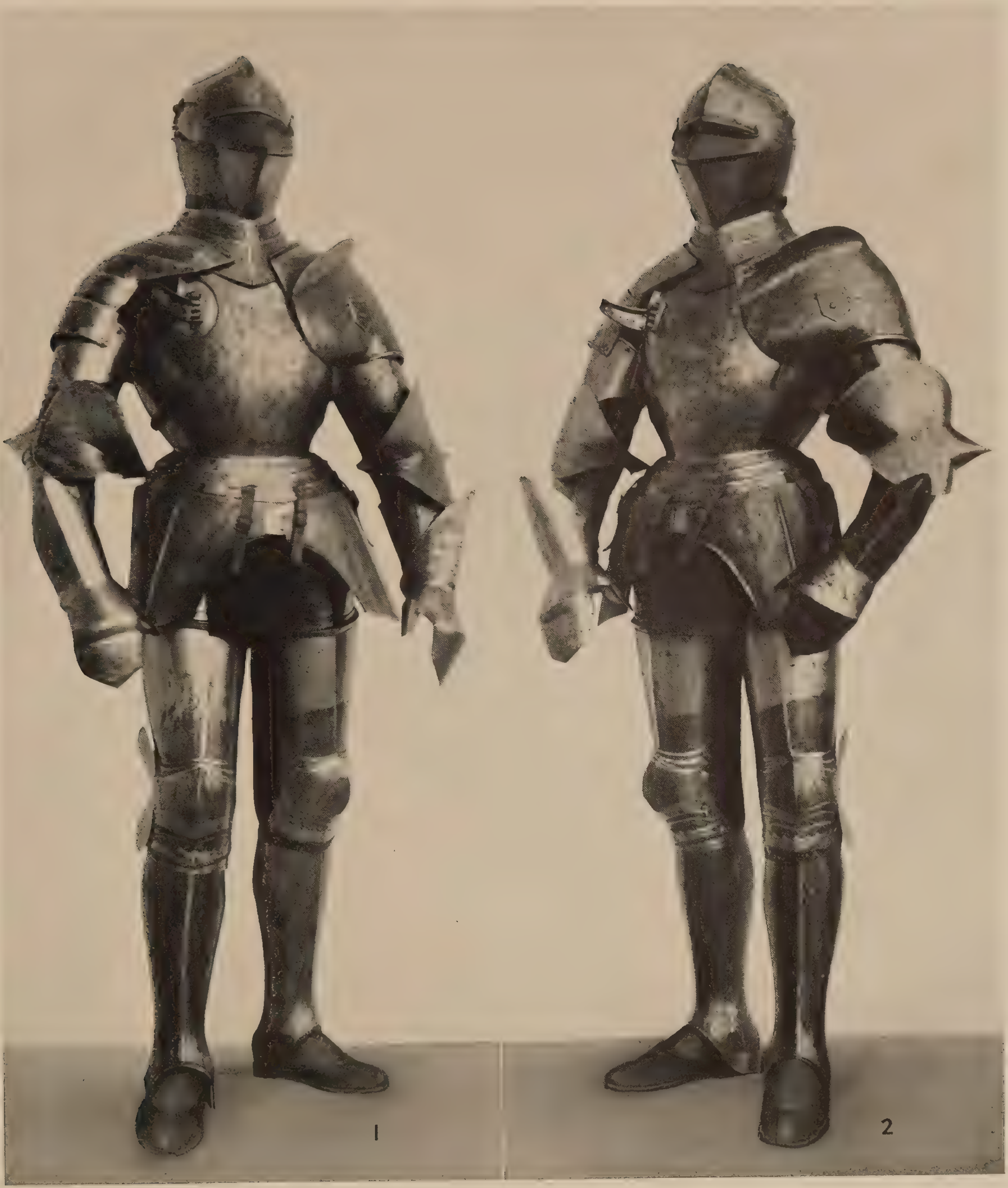
[1] *Archaeologia*, lxxx, pl. xx. There were several of his armours listed in an inventory of the armoury of the castle at Mantua taken in 1542 after the death of his successor. One of these is now in the Ambras collection in Vienna. At the time the inventory was made most of the armour was probably already *in situ* in the church of the Sanctuary, and this suit cannot therefore be identified with one of those bearing his name in the inventory.

[2] See p. 322. Others are on the breasts of nos. **1**, **2**, and **4**.

[1] Modern writers have limited it to the armour of the forearm below the elbow in contradistinction to the rerebrace above the joint. But contemporary texts make it clear that the vambrace could be regarded as including the forearm, elbow, and part of the upper arm. The rerebrace covered the shoulder and upper part of the arm only. Similarly the words gardbrace or *garde-bras* were used in the fifteenth century as a variant for the pauldron, but modern writers, especially in France, have misused the term to denote an elbow-guard. Inconsistencies in terminology lead to much needless confusion.



1 and 2. Two views of the fifteenth-century armour no. I in the Sanctuary

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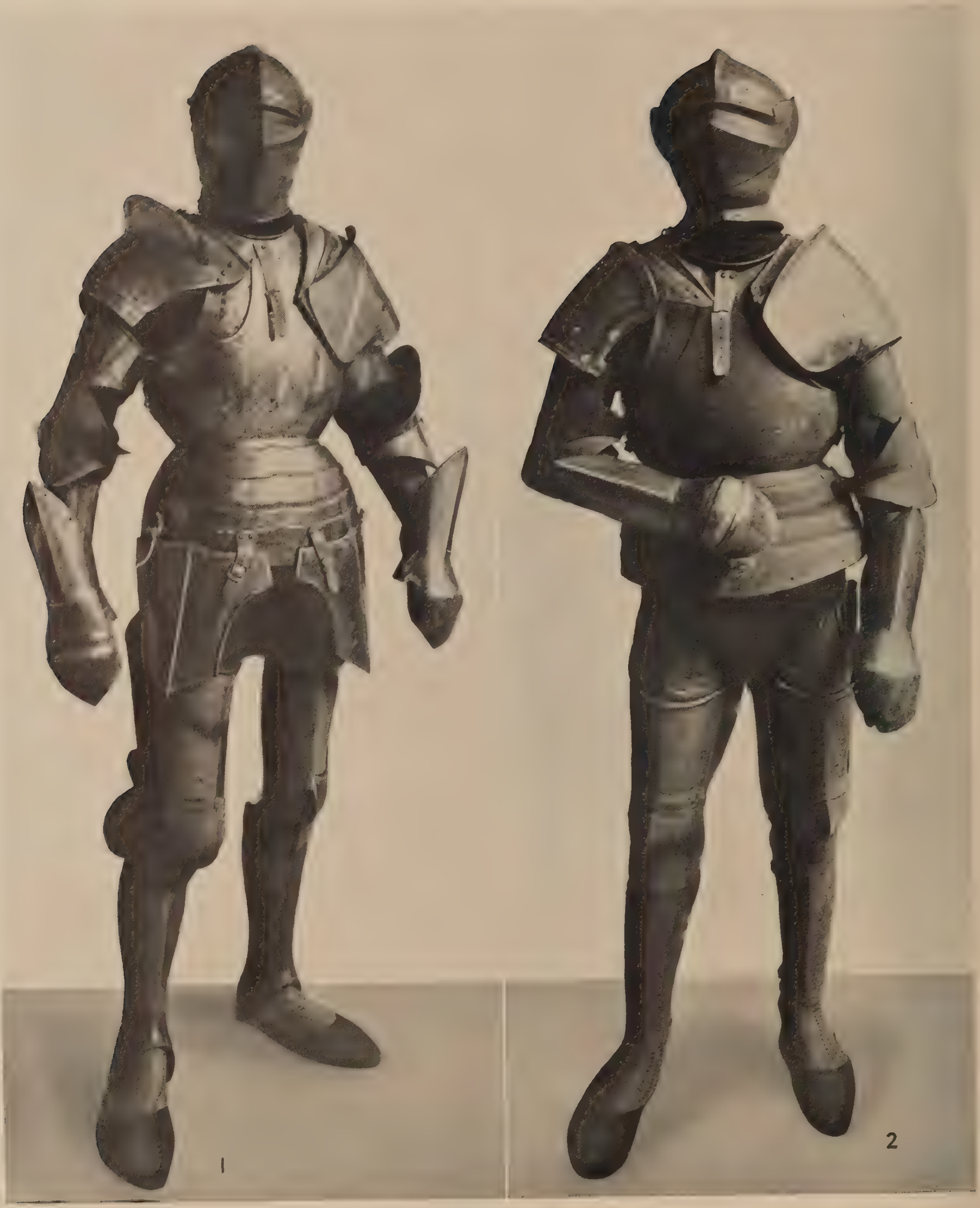

1. Armour of the fifteenth century, no. 2 in the Sanctuary
2. Armour of the fifteenth century, no. 4 in the Sanctuary

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The cuisses (pls. CXI, 4; CXXII, 3) are stamped with a triple mark on the top lame (fig. 55), and are distinguished by a diagonal *lisière d'arrêt* forged in a sweeping curve out of the upper edge of the main thigh-plate. The poleyns[1] have rounded wings at the sides, and are articulated by means of two lames above and below, with the addition in each case of an engrailed plate overlapping upwards, to which is attached the wire intended to support the mail fringes. A number of links of the latter are still attached to it. The greaves are built in two halves in the usual way, with internal hinges on the outer side. The borders of the insteps are pierced for the attachment of mail shoes.

2. The second suit (pl. CIII, 1) as now assembled has many interesting features. The armet is of the same type as the last, but carries a triple mark on the back of the skull (fig. 38). The breast (pl. CXII, 1) is of specially fine form resembling that in a drawing by Alvise Vivarini[2] in the Uffizi Gallery (pl. CI, 2), being deep and rounded, with the lower part coming well up the chest in front, where it is held by a strap. The front and back portions, both upper and lower, are hinged together on the left side, and are fastened on the right by a strap and buckles and by a hook which engages in a slot (pl. CXIII, 1, 3). The lance-rest is absent, though four holes show where it was affixed. There is a skirt of four cusped lames, rounded on the hips, from which depend two pointed tassets of elegant form. The upper breast and bottom lame of the skirt bear an interesting triple mark with a spurred O (fig. 34), the two lower stamps of the three being similar to those on the armet. The back (pl. CXII, 3) consists of an upper and a lower portion: the upper is built up of one main plate and three pointed lames overlapping upwards; on the centre one is riveted a buckle which receives the strap from the lower half. The latter consists of one pointed plate shaped to the waist and bearing the same triple mark. The pauldrons are well built: both have reinforcing plates with upstanding guards; that of the left is distinguished by the diagonal ridge often seen on English monumental brasses and tombs, and fastened by a staple and linch-pin. It has a triple mark including the cross-keys (fig. 10), which will be discussed later.[3] The arms (pl. CXIX, 3, 4) are similar to the first suit, having the large additional guard on the left elbow. When this is detached, the smaller articulated couter inside is revealed (pl. CXX, 4). The tendon-protector on the right has the upper part reinforced like the last with a double thickness. It carries a triple mark (fig. 56). The gauntlets (pl. CXXI, 2) have pointed cuffs

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[1] The word poleyn is here used in preference to the later knee-cop as it was the term in use in England at this time. When Richard Beauchamp, earl of Warwick, issued his challenge to all comers to meet him in the lists at Calais in 1414, he had painted a pavise with the emblem of 'a lady sittyng in a gardeyn makeyng a Chappellet, and on her sleve a poleyn with a Rivet'; *Pageant of the Birth, Life and Death of Richard Beauchamp, Earl of Warwick*, edited by Viscount Dillon and Sir W. St. John Hope, 1914, p. 53.

[2] J. Byam Shaw, *Old Master Drawings*, vol. vi (1931), no. 21, pl. 7.

[3] See p. 335.

and are built similarly to the last, namely, the right of four plates, the left of two.

The cuisses (pl. CXXII, 2, 4) are unequal in height, since a lame is missing from the left poleyn. As formerly set up in the church, two of the figures were fitted with two right and two left cuisses respectively. These had to be separated and properly paired off. That the cuisses are now a pair can be seen from the serrated edge of the cusped lame between the main plate and the top plate, and they carry the same marks (fig. 60). The right cuisse retains the vertical plates, boxed and hinged to enclose the back of the thigh. A row of holes is pierced in the extra plate overlapping upwards below the poleyns for mail fringes, a link or two of which remain, and another row is pierced for the same purpose round the bottom edge of the greaves. The oval wings of the poleyns are plain.

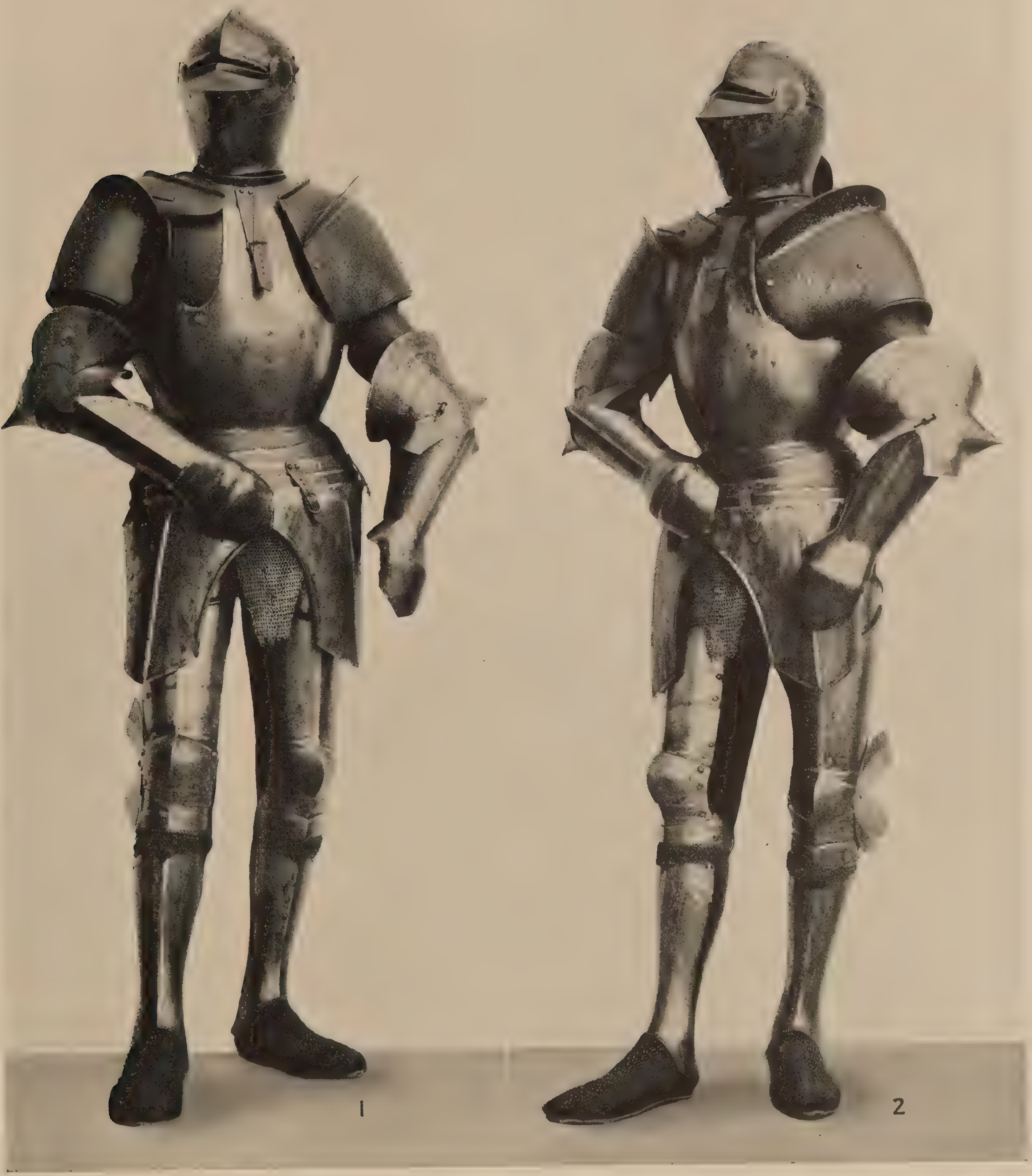
3. The third Gothic suit (pl. CIV) reproduces in many respects the form of the preceding two. The armet differs in that the cheek-pieces are not cut out in front of the mouth, and it retains its rondel at the back of the skull (pl. CIX, 8, 9). The fine breast (pl. CXII, 2, 4), built in two separate parts with the lower one overlapping the other in a high point, together with the laminated backplate, closely resembles that of the last suit, but bears a different mark (fig. 9). The tassets which were previously on no. 1 are exceptionally long and carry the same triple mark (fig. 3) as that stamped on the legs. There is a small mail brayette as on no. 1. The pauldrons are of large size with reinforcing plates in front, and extending far behind (pl. CXVI, 1–4). Both arms have well-shaped couters (pl. CXX, 1, 2, 3). The left has, like the last two, a large reinforcing guard attached by a staple, and its surface is relieved by two moulded ridges or crestings. It carries a double mark (fig. 68) and there is a single mark on the upper arm (fig. 69). One gauntlet, the right, survives, and like the other right-hand gauntlets is built up of four plates (pl. CXXI, 3). The pair of gauntlets shown in pl. CVII have already been described under no. 2, and were used only for the purpose of the photograph.

But a feature of unique importance on this suit is the legs (pl. CXXIII, 2, 4). These were found on the seventh figure in the church,[1] and they possess their original mail fringes and shoes. The last two rows of links of the former and the final one of the latter are of latten. The only other authentic examples of this feature, so often reproduced by the Old Masters (pl. CI, 1 and 2), are to be seen on one of the Churburg armours[2] which retains its mail shoes, and the legs of the so-called armour of the *condottiere* Niccolò da Tolentino,[3] which retains the mail fringes at the knees. All other instances of mail fringes at the knees known

[1] *Archaeologia*, lxxx, pl. XXII, 1.

[2] Trapp and Mann, *The Armoury of the Castle of Churburg*, 1929, no. 20. It is reproduced in *Archaeologia*, lxxx, pl. XXIII, 3, and is now in the collection of Mr. R. L. Scott.

[3] *Archaeologia*, lxxx, pl. XXVIII, 3.



1 and 2. Two views of the fifteenth-century armour no. **3** in the Sanctuary

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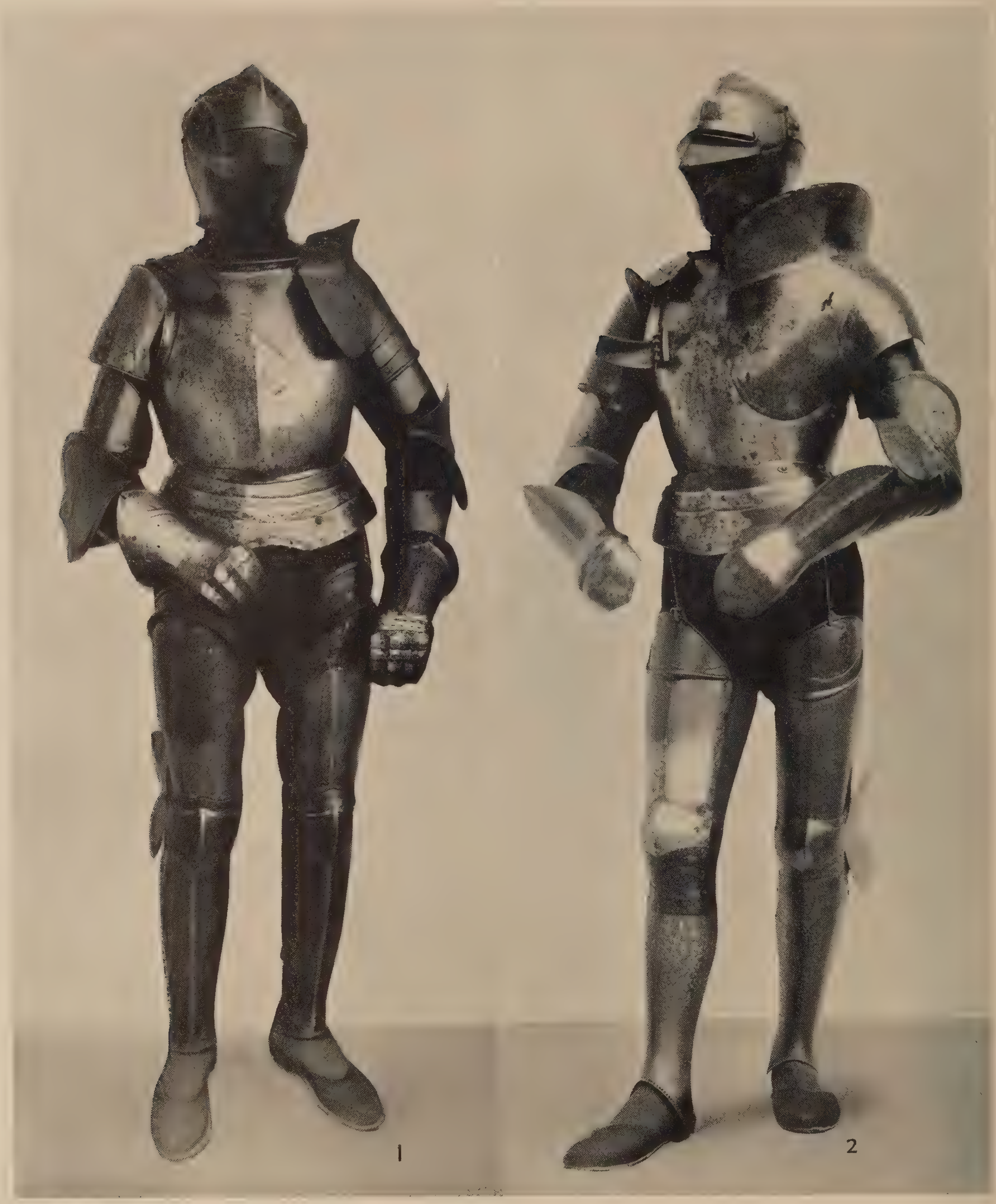

1. Armour, *c.* 1500, no. **6** in the Sanctuary
2. Armour, late fifteenth and early sixteenth century, no. **5** in the Sanctuary ✓

Published by the Society of Antiquaries of London, 1938

to the writer are modern restorations, often added where no fringes originally existed. No other legs than these in the Sanctuary are known to possess both fringes and mail shoes. The cuisses are well constructed, and the right one retains the vertical hinged plates boxed to enclose the back of the thigh. The well-known triple mark (fig. 3) is on the uppermost plate in each case. The poleyns have finely moulded wings at the sides.

4. The next suit to be described (pl. CIII, 2) has a neat little armet of a different type from the last three (pl. CVIII, 3, CX, 3). It is shaped at the neck, and the cheek-pieces are cut low to leave more room for the face. Other distinctive features are the piercing of the right side of the visor, and the manner in which the lower edge of the sight is turned upwards and not doubled over. The articulated breast and back, large and rounded (pl. CXIII, 2, 4), resemble the last two in build, but are stamped with a different mark, very distinctly impressed several times in all (fig. 33). The tassets are missing, but flat rosette-headed rivets show where they were once attached by straps to the third of the four lames of the skirt. The line of rivets along the border of the lowest lame secured the lining. The pauldrons (pl. CXVII, 1–4) are of ample build like those of no. 3, with reinforcing plates attached in each case by a central bolt in front, and one shows triple M marks (fig. 9). At the back they extend far beyond the shoulder-blades, the left being built of four and the right of five lames, the lower two cusped. A rib for strengthening it is riveted along the top edge of the middle lame of the right shoulder. The arms (pl. CXXIX, 2) are less impressive in outline than those hitherto described. The left elbow has an additional guard very little larger than the couter which it covers; the upper and lower cannons are articulated twice above and once below. The lower cannons of the vambraces are of the usual Italian type, hinged on the outside and fastened by a buckle and strap across the forearm. There are no gauntlets and those shown in the illustration of this suit are those already described under no. 2. The legs are incomplete and lack the backplates of both cuisses and greaves. The cuisses are good and are similar in build to those of the last suit, except that the bottom lames of the poleyns are longer. The front plates of the greaves are of poor form and material, and though old, were probably added when the figure was dressed for the Sanctuary.

5. The fifth and sixth Gothic suits (pl. CV, 2, 1) present a somewhat later appearance than the others by reason of the form of their breast and backplates. These are forged in one piece without placates or articulation. The armet of the fifth (pl. CVIII, 5, CIX, 7) is of good fifteenth-century form, with an interesting triple mark with a castle on the back (fig. 44). The breast, which has strong turn-overs at neck and armholes, retains its lance-rest (pl. CXIV, 2). There are three lames to the skirt and a triple M mark (fig. 9) in the centre of the lowest. The

left pauldron is fitted with a very large, enveloping reinforcement with high upstanding neck-guard, probably dating from very late in the century or early in the next. It is affixed by a bolt to a pauldron of four plates, of which the main plate has an outward-turned flange which fits neatly within the high neck-guard of the reinforcing plate (pl. CXVIII, 4). The right pauldron (pl. CXVIII, 1, 2) is similar to those on nos. 3 and 4 already described. It has a reinforcing piece in front, affixed to six lames which extend far behind, the two lower being engrailed along their upper edges. Instead of a *lisière d'arrêt* or stop-rib, riveted to the main lame, it is strengthened by a corresponding ridge embossed along its upper edge. It carries the same mark as the breast-plate (fig. 9). The arms are symmetrical and they too are probably later in date than those previously described. They have large wings attached to the couters to protect the bend of the arm and no reinforcing plates (pl. CXXIX, 3). There are two lames above and two below the couter in each case. There are no gauntlets, and those shown in the photograph have already been described with no. 2. The legs are good examples of fifteenth-century Italian armour (pl. CXXIII, 1, 3). The cuisses, as usual, consist of a main thigh-piece, with a strong turnover to act as a *lisière d'arrêt* at the upper edge, above which is a narrow cusped lame, and then a larger topmost plate bearing the armourer's mark (figs. 58, 59). The right one retains the longitudinal hinged plates for the back of the thigh. The poleyns are articulated once above and twice below, and the left one retains the extra lame pierced for carrying the mail fringe. The side-wings are of simple heart-shaped form. The lower edges of the greaves are perforated for the attachment of mail shoes.

6. The sixth and last of the Gothic armours carries an armet with a small visor (pl. CX, 1, 2). There is a single mark of a split cross (fig. 70) on the right side only at the back of the skull. The breast-plate, like that of no. 5, has no placate, and is built in one piece (pl. CXIV, 1). It is fitted with gussets at the armholes, another late sign, and it probably dates from between the years 1490 and 1510. There are three lames to the skirt and no tassets. The left pauldron (pl. CXVII, 6) is varied by shell-like flutings, and two holes in front suggest that it possessed a large reinforcing plate similar to no. 5. The right one, which is not a pair to it, is earlier and more strictly Gothic in form. It is built of five lames, the two lower ones attached by sliding rivets, with a *lisière d'arrêt* riveted along the upper edge of the main plate at the back (pl. CXVIII, 5, 6). The arms, like those of the last suit, are symmetrical (pl. CXXIX, 1), and their date is probably contemporary with the breast-plate. It happens that the smith, when removing the nails which held them rigid, has exchanged and reversed the couters, but it is a simple matter to put this right. The borders of the wings are sunk. Both the gauntlets are fluted mittens, but are not a pair, as can be seen from the decoration of the cuffs (pl. CXXI, 4). These, too, probably date from about 1500 and are

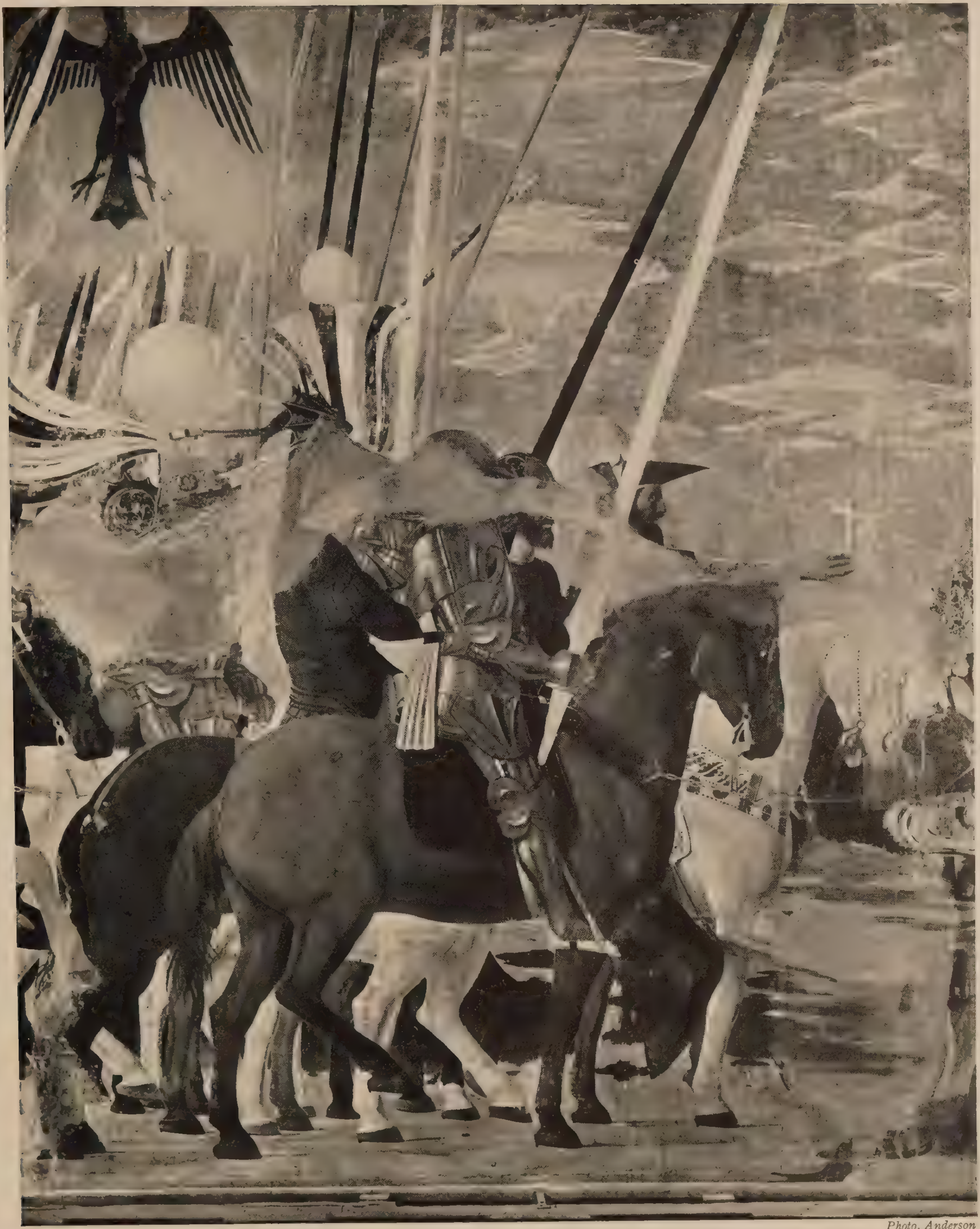

Photo. Anderson

Detail of the fresco of Constantine's victory over Maxentius in the church of S. Francesco at Arezzo, painted between 1452 and 1466 by Piero della Francesca

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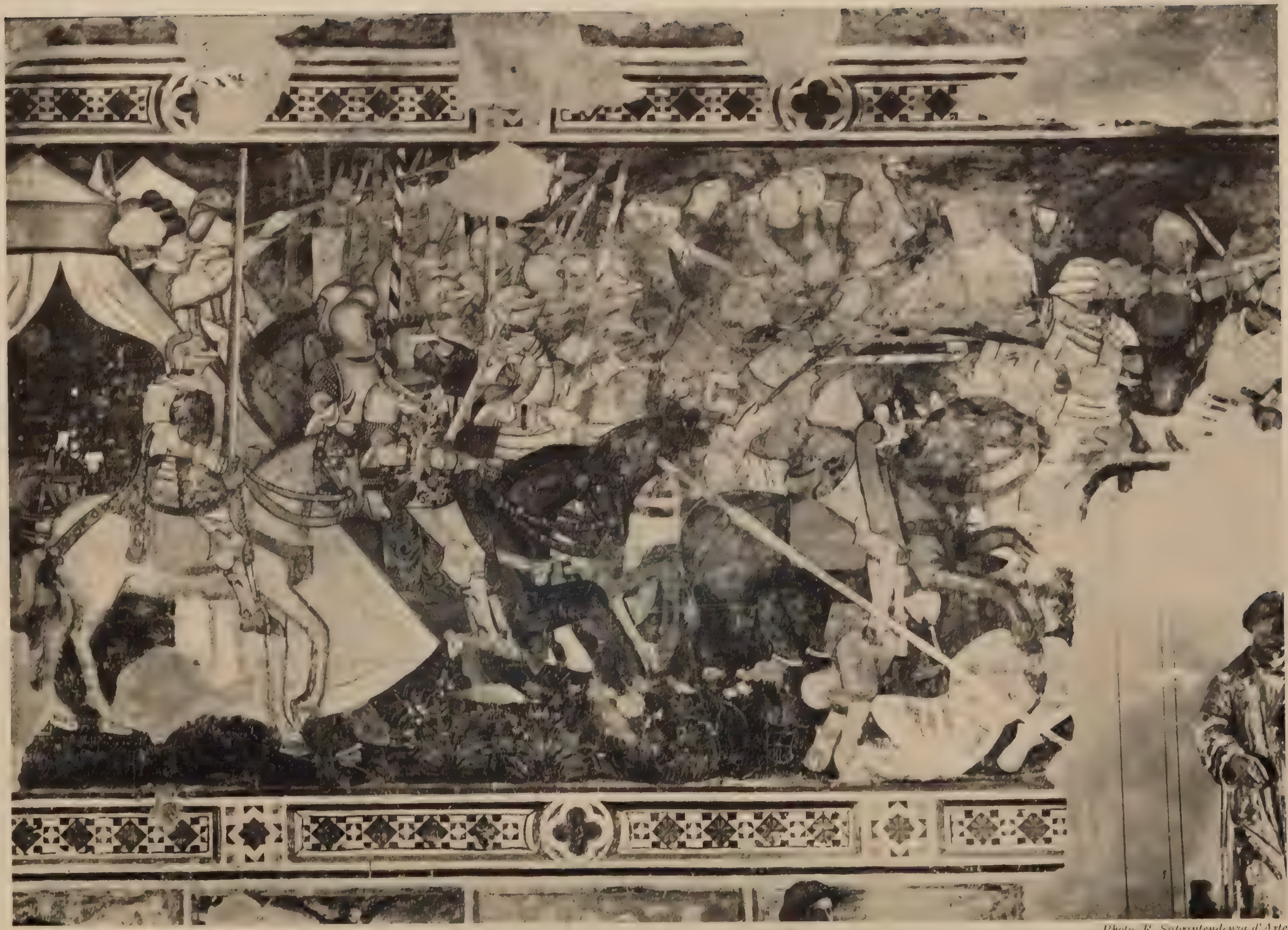

Photo. R. Soprintendenza d'Arte

Wall painting of a battle, removed from the castle of Sabbionara at Avio and now in the Diocesan Museum at Trent, mid-fifteenth century

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on the threshold of the so-called 'Maximilian' fashion. The legs are well built, but late (pl. cxxii, 1). The cuisses have deep hollow flanges, forming *lisières d'arrêt* to protect the groin. They retain their protection for the back of the thigh, consisting in this case of a single hinged plate to each. The bottom edge of the greaves is cut off straight in the Italian fashion of the sixteenth century, and is not shaped to the instep like the earlier examples previously described.

The appearance of these armours in their pristine state, with their straps covered in crimson velvet and their armets topped with immense plumes and globular crests, can be seen in the battle-pieces of Paolo Uccello or in Piero della Francesca's fresco in the church of S. Francesco at Arezzo (pl. cvi).

Sometimes the breast-plates, when formed of one piece, like those of nos. 5 and 6, were covered with gold brocade, as worn by two of the figures in the fifteenth-century painting of a battle removed from one of the walls of the castle of Sabbionara, and now in the Diocesan Museum at Trent (pl. cvii). This painting recalls Uccello's composition 'The Rout of San Romano' in the National Gallery, even to the trumpeters in the background, but is by a less accomplished hand. Yet the details of the armour are reproduced with knowledge. The horsemen are depicted as wearing sallets as well as armets. It is interesting to notice that in the pose of the falling horseman wearing a T-shaped sallet, on the right, the painter has reproduced a detail from a wall-painting of a century earlier in the same castle.[1] There are no sallets in the Sanctuary. A good representation of the armour of this time is given by the reliefs of SS. Faustino and Giovita erected at Brescia in memory of their intervention in the siege of 1438 (pl. cxxiv, 4).

Milanese harnesses were in wide demand outside Italy. Our Fellow Mr. M.S. Giuseppi has kindly drawn my attention to the following contemporary evidence of the purchase of Milanese armour in England.

(Public Record Office, *Exchequer* (E. 101), 128/31)
m. 4.

Cest la view de Richard Riche surveiour et oste ordeigne et depute par Robert Large maier de la Cite de Loundrez sur lez marchauntz esteauntz en lostiell de Johan Michell, Cestasavoier sur le dit Johan Michell et Felix de Fagnano marchauntz de Luke et Alisaundr' Palestrell pur surveiour taunt bien lour marchaundisez trovez en lour gard ou aprez venauntz come lemployment dicell parentre le Feste de Pasque lan du notre sovereyne seigneur le Roy Herr' vjme xixme et le Feste de Seint Michell proschein ensuant.

Les marchaundises venduz par les ditz marchauntz de lez marchaundises trovez en lour meson al Feste de Pasque lan xviij me.

En primez a j Squyer le xvj jour de Maij *j harneys de Meleyn complet'* pur v li.
Item a j altr' Squyer le xviij jour de Maij *j peir' legg harneys* pur xx s.

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[1] *Archaeologia*, lxxxiv, 73, fig. 1.

m. 7.

C’est la view de Richard Riche surveiour et oste ordeigne et depute par Robert Large maier de la Cite de Loundrez sur lez marchauntz esteantz en lostiell de Johan Michelle, Cestasavoier sur le dit Johan Michelle et Felix de Fagnano marchauntz de Luke et Alisaundr’ Palestrell surveiour taunt bien lour marchaundisez trovez en leur gard oue aprez venantz come lemploiment dicell parentre le Fest de Seint Michell lan du notre sovereyne seigneur le Roy Herr’ Sizme xix et le Fest de Pask proschein ensuant.

Les marchaundisez venduz par lez ditz marchauntz de lez marchaundisez trovez en lour meson al Fest de Pask lan du notre sovereyne seigneur le Roy Herr’ vjme xixme.

It’m a Ser John Cresy le xvij jour de Dec’ *j harneys de Meleyn complet’* pur	viij li. vj s. viij d.
It’m a j Squyer le vij jour de Janever *j harneys de Meleyn complet’* pur	v li.
It’m a altr’ Squyer le xxij jour de Jonever *j harnes de Meleyn complet’* pur	v li. xvj s. viij d.
It’m j *peyr legg harneys* et j *peyr Gloves* pur	xxvj s. viij d.
It’m a j Squyer le iij jour de Fev’ *j harneys de Meleyn complet’* pur	v li. vj s. viij d.
It’m a ij altres Squyers *ij harneys de Meleyn complet’* pur	xij li.
It’m a altr’ *iij salattes* pur	xx s.
It’m a ij Squyeres le xviij jour de Fev’ *ij harneys de Meleyn complet’* pur	xj li.
It’m a John Savyle le mesme jour *j harneys de Meleyn complet’* pur	vj li.
It’m j *payr Glovez* pur	v s. viij d.

Sir John Cressy is commemorated by an alabaster effigy in armour in Dodford Church, Northamptonshire (pl. cx, 7). The inscription round his tomb recounts that he was captain of the towns of Lisieux, Orbec, and Pont l’Évêque in Normandy. Hartshorne states that he commanded a force of 54 horse and foot lancers and 147 archers.[1] He died at Tove, in Lorraine, on 4th March 1444, shortly before his thirty-seventh birthday. The complete Milanese armour which he purchased in 1441 from the merchants Johan Michelle (presumably Giovanni Michele) and Felix de Fagnano (Felice da Fagnano), of Lucca, and Alessandro Palestrelli for the sum of £8. 6*s.* 8*d.* would be one of the earlier fashion with a deep skirt of lames like nos. 19 and 20 at Churburg.[2] Unfortunately his effigy does not reproduce it plate for plate like the Milanese armour on the bronze effigy of another and more exalted English commander in France, Richard Beauchamp, earl of Warwick, at St. Mary’s, Warwick. The armour on Sir John Cressy’s effigy is a stock pattern of the Nottingham alabastermen. Yet some of the alabaster tombs show clearly enough pauldrons of Italian type with reinforcing plates superimposed on narrow lames at the neck, for instance, those of Sir Nicholas (*d.* 1473) and Sir Ralph (*d.* 1483) Fitzherbert at Norbury, Derbyshire. Brasses of the type of Richard Fox (*d.* 1439), at Arkesden,

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[1] *The Recumbent Monumental Effigies in Northamptonshire*, 1876, 32.

[2] Trapp and Mann, *The Armoury of the Castle of Churburg*, 1929, pls. xx and xxiii.

Essex,[1] and that of Richard Quatremayns, *c.* 1460, at Thame, Oxfordshire,[2] show in the formation of the pauldrons and the large, unsymmetrical elbow-pieces slightly exaggerated, but unmistakable illustrations of armour of the Milanese fashion. There are numerous references to sallets of 'meleyn', with and without visors, in the Howard household accounts of the second half of the fifteenth century.[3] The prices of £8. 6*s.* 8*d.*, £6, £5. 16*s.* 8*d.*, and £5. 10*s.*, paid by Sir John Cressy and his squires for complete suits, can be compared with the price of £6. 16*s.* 8*d.* given twenty-eight years later by Master Nicholas Howard on 30th September 1468, 'paid for a harnes complete for hym and an estrich fether vj *li.* xvj *s.* viij *d.*', and on 16th October: 'John Nytere. Item, paid for a harness complete for hym and an estriche fether vij *li.*'[4]

Comparison of the Component Parts of the Six Armours of the Fifteenth Century

Armets. There are seven armets in the Sanctuary. By this name is denoted the type of close-helmet formed of a skull, to which are hinged two cheek-pieces meeting and fastened at the chin, and fitted with a pointed visor in one piece, the sight usually being formed by the gap between its upper edge and the skull. Except in very early instances, the brow has the additional protection of a cusped reinforcing plate. Meyrick first drew attention to this characteristic Italian head-piece of the fifteenth century, but it is the late Baron de Cosson who has given to it its special place in the literature of armour.[5] This compact form of close-helmet came into being in the first half of the fifteenth century as a substitute for the bascinet with plate gorget, and its earliest form is demonstrated by two examples in the Armoury at Churburg (nos. 18 and 57), by one in the Tower of London, and one now in the Mackay collection, but formerly in that of the Baron de Cosson.[6] Other examples of the early armet have been retrieved from the Venetian arsenals at Chalcis and Rhodes in the Levant, several of which are now in the Dean collection in the Metropolitan Museum.

The seven armets in the Sanctuary are all of the same generic type, the earliest probably dating from the middle of the fifteenth century, but all differ in the details of their form. Three of them bear armourers' marks (figs. 38, 44, 70), and there are traces of what may have been a mark on a fourth (no. 1). The armets on the armours nos. 1 and 2 (pls. CVIII, 6, 2, CIX, 1–3, 5, 6) are probably the earlier in point of date, as the visors are small, with heavily turned-over upper edges, and the chin-pieces high and stiff, with little modelling to the shape of the neck. In this respect they are not far removed in form from the early examples mentioned above. To accommodate the mouth the high barrier in front is cut into a U-shaped vent on nos. 1 and 2. There is no such vent on nos. 3, 5, and 6, as the face opening is much larger. That on no. 11, illustrated on pl. CVIII, 4, is almost certainly the latest in point of date, as it is etched with floral and engrailed patterns, and the cheek-pieces are pierced on each side with a circle of holes for hearing such as occurs on helmets of the sixteenth century. The plume-holder at the side is a late sign, but may have been added subsequently. This armet, which is damaged on the right side of the jaw, and that on no. 4 (pl. CVIII, 3, CX, 3, 5) have the hinges of the visor concealed; they fit more neatly at neck and chin, and the lower edge sweeps in a curve to a short tail at the back. Their chins are not so steep, the upper edges of the visors have not the same rigid turnovers, and the point is *retroussé*. They can be compared to the helmet from the Argaiz and de Cosson collections, now in the Cleveland Museum, Ohio,[1] and an etched one in the Musée de l'Armée, no. H 56.[2]

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[1] *Archaeologia*, lxxx, 124, fig. 4; C. Boutell, *The Monumental Brasses of England*, 1849.

[2] Laking, *Record*, i, fig. 208; Boutell, *op. cit.*

[3] Published by the Roxburghe Club, 1841 and 1844; extract reprinted in *Trans. Essex Arch. Soc.*, vol. xxii (N.S.), pt. 2, 1939.

[4] Within little more than a century Lord Pembroke was paying £500 for his enriched Greenwich suit, which is now in the Metropolitan Museum at New York; in 1921 it changed hands for many times this amount.

[5] Catalogue of an Exhibition of Helmets and Mail, *Arch. Journal*, lxxx, 1880, p. 27. The etymology of the word is uncertain; cf. Victor Gay, *Glossaire archéologique.*

[6] Laking, *op. cit.*, ii, figs. 430 and 431.

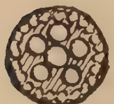

Fig. 1

As already noted, the armet on no. 1 has characteristic Italian flat-headed rivets stamped with a rosette (fig. 1). This feature occurs on several other parts of armour in the Sanctuary, and when repairing the armour care was taken to ensure that they were preserved. There is in existence so much Italian armour of the fifteenth century with rivets of this kind that it is unlikely that they indicate the work of one armourer, and their presence may be due to their having been bought wholesale from a smith who supplied the trade with hand-wrought rivets.[3] Unfortunately a modern restorer has hit on the idea of copying them, and in recent times they have been inserted in armour where they probably never existed, with the consequent risk of sadly misleading future students.

As previously noted, the armet on the first suit retains its 'wrapper', which was found bent nearly double and forced inside the chin. It can be seen peeping through the vent cut out opposite the mouth of the armet in the illustration to my previous account of the Sanctuary.[4] It has since been straightened out, a strap and buckle added, and now fits closely to the visor of its armet as

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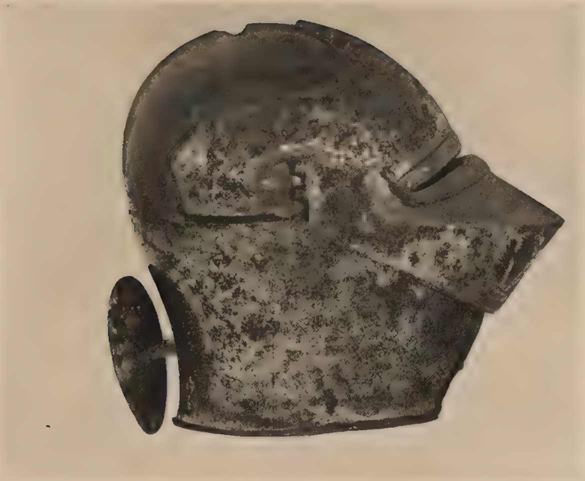
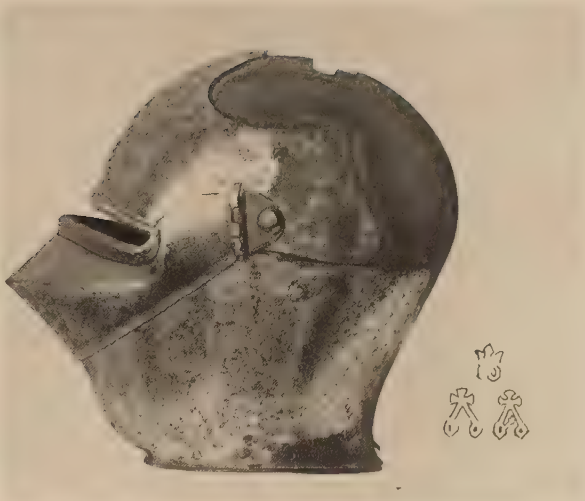
[1] Laking, *Record*, ii, fig. 440; Helen I. Gilchrist, *Catalogue of the Severance Collection of Arms and Armor presented to the Cleveland Museum*, 1924, pl. VII.

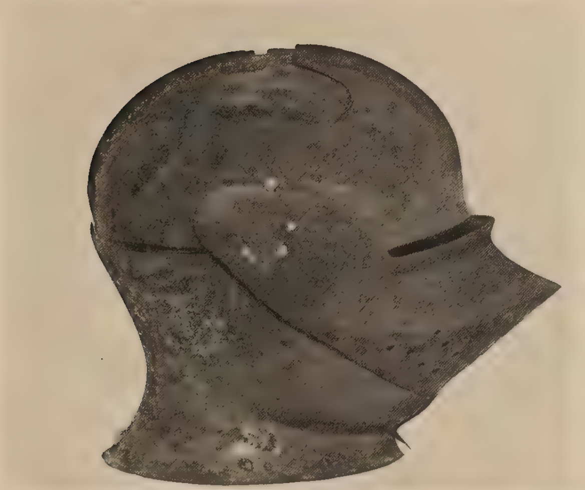
[2] Laking, *op. cit.*, ii, fig. 441.

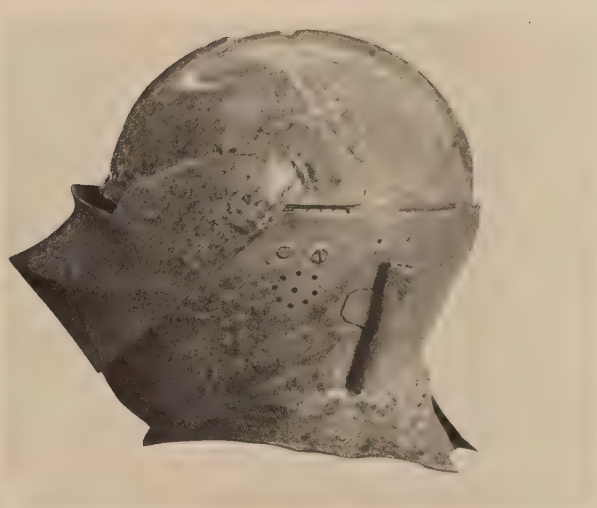
[3] The Howard household accounts record the purchase of 20,000 brigandine nails for 11*s.* 8*d.*

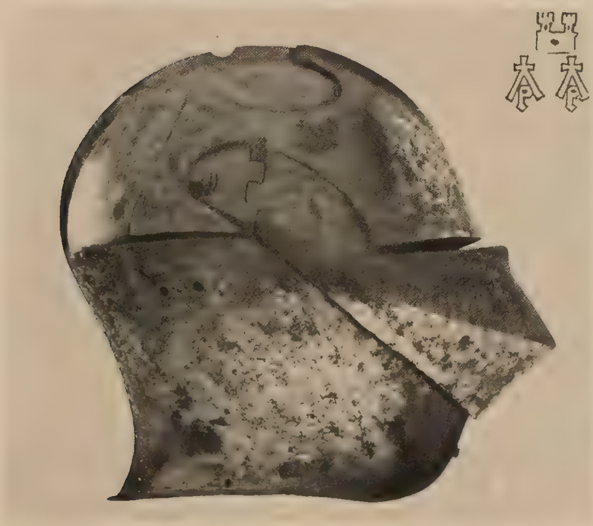
[4] *Archaeologia*, lxxx, pl. xx.

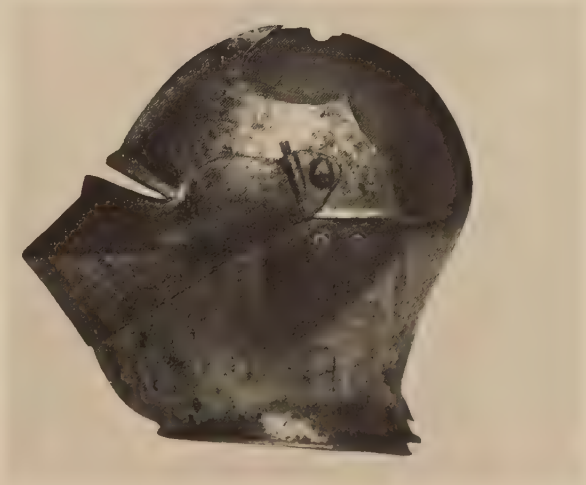












1. Armet of no. 3 2. Armet of no. 2 3. Armet of no. 4 4. Armet of no. 11 5. Armet of no. 5 6. Armet of no. 1

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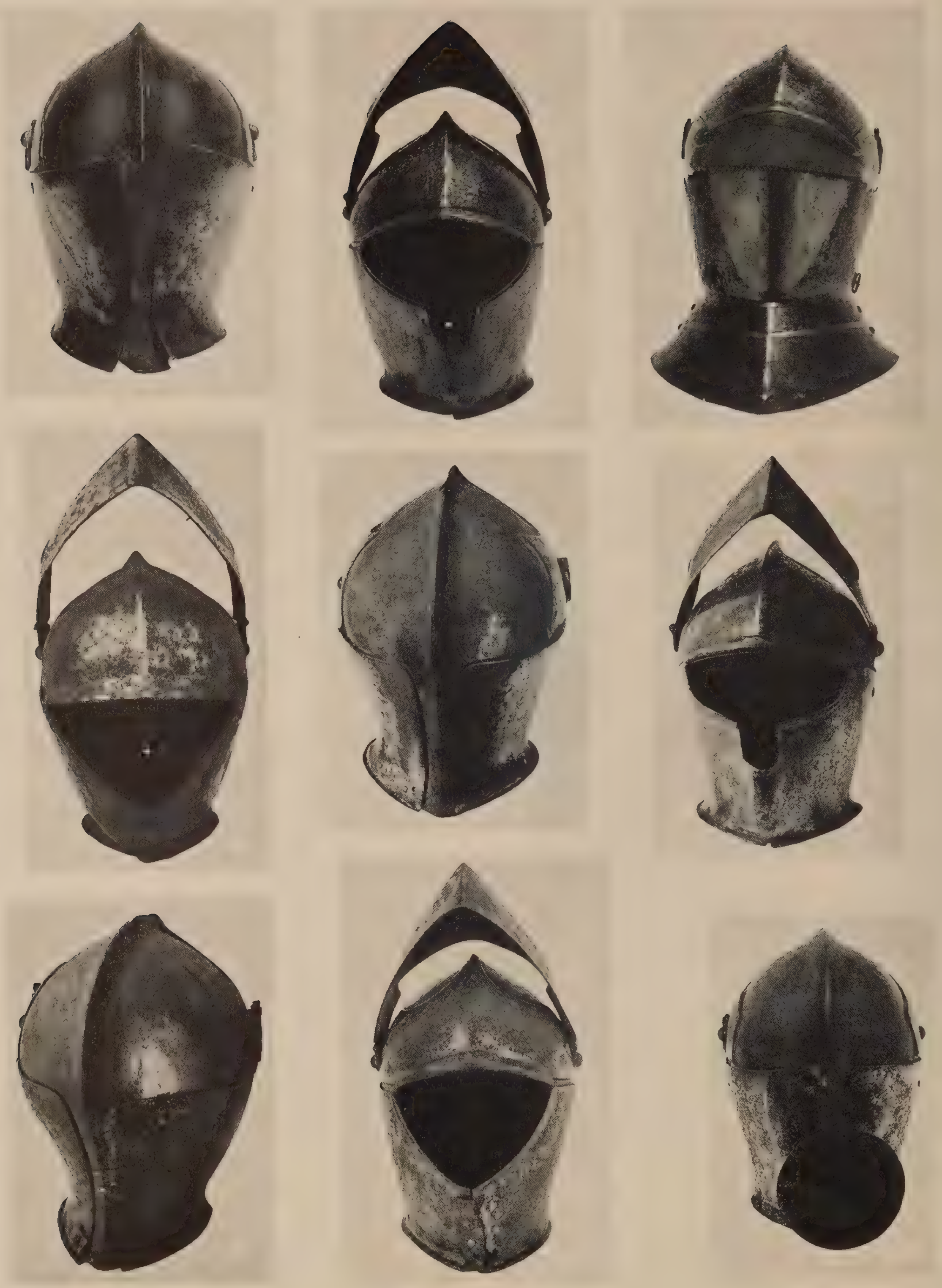

Armets in the Sanctuary, front and back views
1-3, of no. 1 4, of no. 5 5 and 6, of no. 2 7, of no. 5 8 and 9, of no. 3

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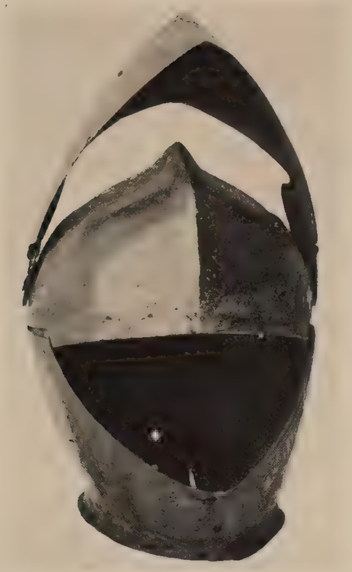

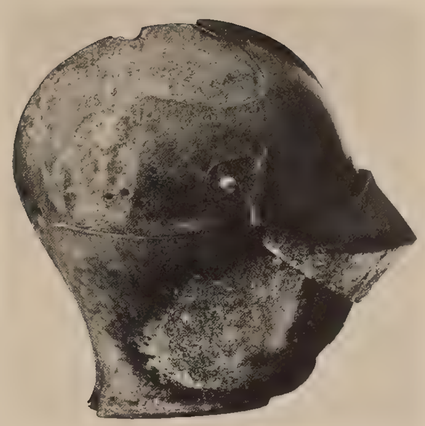

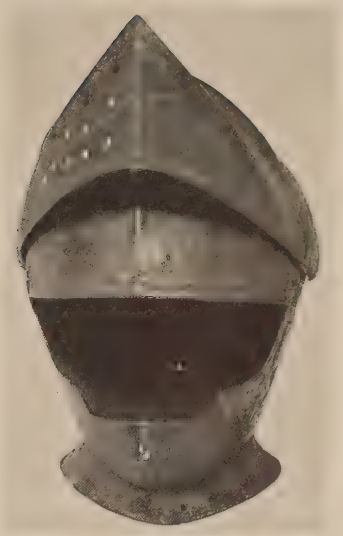

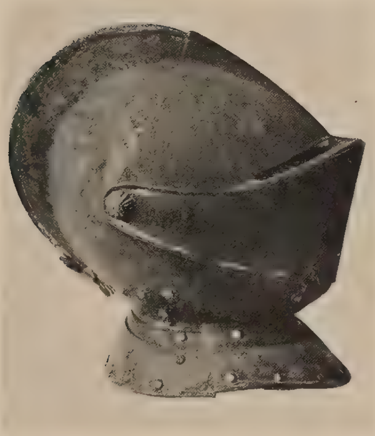

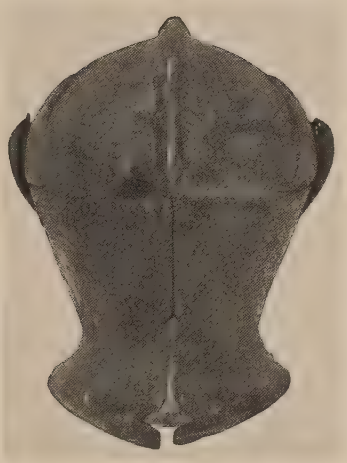

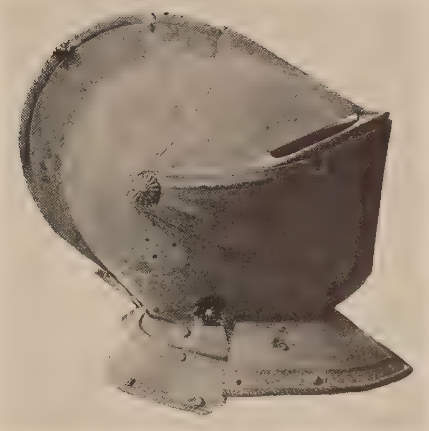

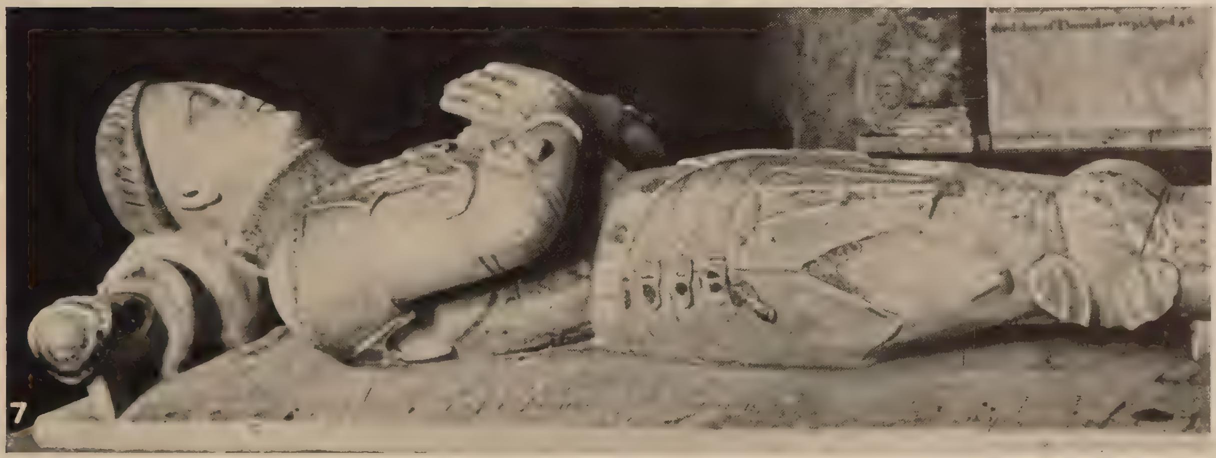

Photo. Arthur Gardner, F.S.A.

1 and 2. Armet of no. 6 3. Armet of no. 4 4. Close-helmet of no. 16 5. Armet of no. 4 6. Close-helmet of no. 17 7. Alabaster effigy of Sir John Cressy, *d.* 1444, in Dodford church, Northamptonshire

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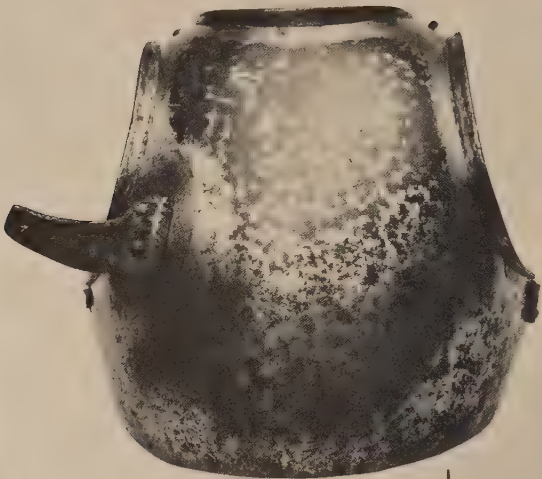

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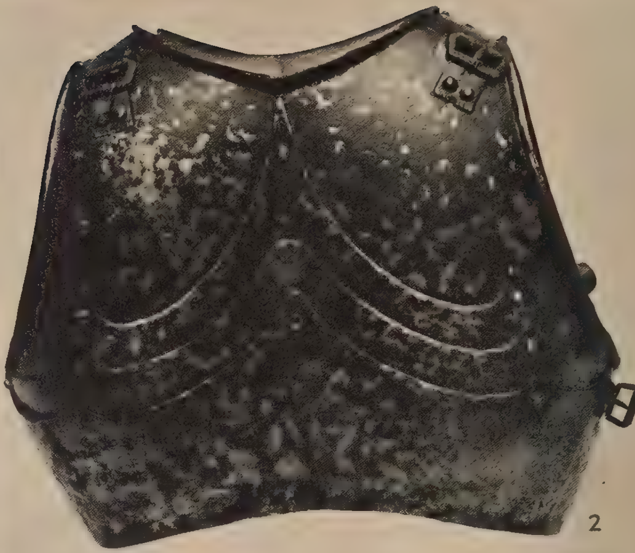

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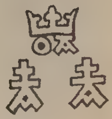

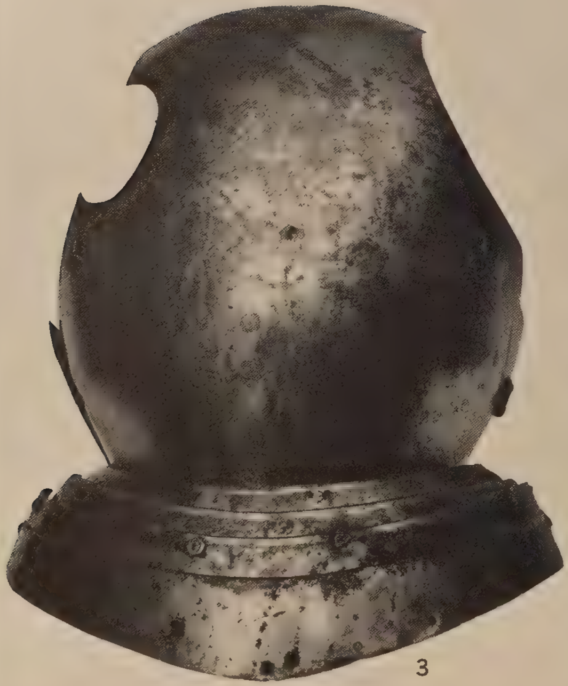

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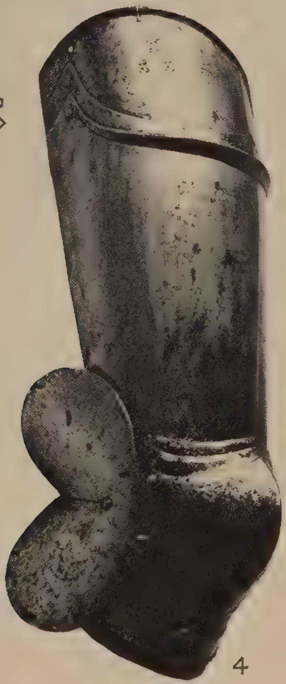

4

1. Inner breast of no. I 2. Backplate of no. I 3. Superimposed breast of no. I 4. Right cuisse and poleyn of no. I

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shown on pl. CIX, 3. It is equipped with three gorget plates and resembles the wrapper on the armet formerly in the Franchetti collection, sold at Sotheby's on 20th June 1929, and now in that of Mr. Clarence Mackay. Another was in the Spitzer collection,[1] and M. Pauilhac possesses a third. There are also two gorget lames of wrappers which were found inside one of the suits when it was dismounted. Wrappers of this kind are shown strapped in position on the armets of some of the mounted men-at-arms in the battle picture from the castle of Sabbionara illustrated on pl. CVII, and in the portraits of Federigo da Montefeltro by Piero della Francesca and Justus of Ghent in the Brera Gallery at Milan and the Palazzo Barberini at Rome respectively.[2]

In the case of the armet on no. 4 the edges of the cheek plates meet in a vertical line down the back, covering the tail and allowing the stem of the missing rondel to project through a hole (pl. CX, 5). The crown is low and the face opening cut wide at the mouth (pl. CX, 3). The visor is pierced with breaths on the right side, the only one to have these.

Breasts and Backplates. The cuirasses of the six fifteenth-century armours in the Sanctuary fall into two groups. Three of them (nos. 2, 3, and 4) have the breast built in two parts, an upper and a lower, the latter cusped and overlapping the other with a high central point. The backs are also in two parts, but the upper is generally built of several plates overlapping upwards chevronwise. The back of the armour of Ferdinand the Catholic at Vienna is built in this way. Chevronny multi-laminated backs of this kind are also to be seen on the armours of Frederick the Victorious at Vienna and of Petermann Feer at Lucerne. The form probably represents a later stage than the more horizontal articulation of those of Ulrich VI Matsch and Galeazzo de Arco at Churburg (pl. CXXX, 1).[3] There is a chevronny back of this kind in the Ressman collection in the Bargello, the component plates of which have been riveted together, and another is to be seen among the armour from Rhodes in the Tower of London.

Of the first group, two closely resemble each other (nos. 2 and 3, pls. CXII, CXIII, 1, 3), though the armourers' marks upon them show that they were made in different workshops. The form is of the finest and resembles that represented in Zaganelli's painting (pl. CI, 1) and on the intarsia panel of Federigo da Montefeltro's study.[4] The lower breast-plate is finely cusped. The upper and lower parts, back and front, are hinged together on the left side and fastened by straps on the right. The lower breast and back are cut out in a rectangular gap to give room to the hinge of the upper portions. The borders of neck and armholes are turned over and the lower breast carries a skirt of five cusped lames. In the case of no. 4 (pl. CXIII, 2, 4) the lower breast or placate differs from nos. 2 and 3 in that it is not swallow-tailed at the point nor cusped at the sides. Nos. 1, 3, and 4 have rivets on the second lame from the bottom for carrying tassets. In the sixteenth century the tassets were usually suspended from the lowest lame.

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[1] *La Collection Spitzer*, 1890, tome vi, no. 28, where it is wrongly represented inside the visor.

[2] Laking, *op. cit.*, i, figs. 225 and 226. Also on the panel representing his armour in his study in the castle at Urbino, *Archaeologia*, lxxx, pl. xxx, 2. This is the *armet à la façon d'Italie armé de sa grande bavière* referred to by Olivier de la Marche in his account of the combat between Jacques d'Avranches and Jacques de Lalain in 1450.

[3] Trapp and Mann, *The Armoury of the Castle of Churburg*, 1929, nos. 19 and 21.

[4] *Archaeologia*, lxxx, pl. xxx, 2.

In the case of no. 1 the breast is differently formed (pl. CXI, 1, 2). This is only one of several details in which this armour shows particular variations. The upper breast is almost complete in itself and reaches nearly to the waist. The edges of the neck and armpits are strongly turned outwards. The lower breast is also very extensive and almost completely covers the upper breast, reaching to the turnover of the neck and left armpit of the latter, but cut away in a circular void to make room for the lance-rest which is bolted to the right side of the upper breast. The upper back is built of one main and three other plates overlapping upwards in cusps, the central point of the topmost reaching to the strong turnover at the back of the neck (pl. CXI, 2). On the shoulders are riveted two buckles for straps joining it to the upper breast, a hinge on the left, and a buckle on the right side lower down. The lower backplate is missing. These pieces bear no armourer's mark. To the bottom of the lower breast is riveted a skirt of four lames, from the third of which depend tassets of characteristic Gothic form, pointed, with flanged edges and central ridge.

There are three pairs of fifteenth-century tassets in the Sanctuary, always the rarest of elements of armour, since they are so easily detached and lost. Those of no. 2 bear an armourer's mark (fig. 57), and are of fine form with the top edge cut to a shield-shaped point in the centre. Those of no. 1 resemble the tassets of no. 2 except that they are rather broader, have no point on the top edge, and have no armourer's mark. Both of them are smaller than the third pair on no. 3 (pl. CXXVI, 3), which are unusually large and of rather light metal. They bear the same marks (fig. 3) as the legs with which they are now associated. Tassets of this kind can be seen on many Italian paintings of the quattrocento, such as the figure of San Liberale in the famous altarpiece by Giorgione at Castelfranco, and St. Michael in Botticino's painting of St. Roch in the Accademia at Florence, and the right-hand figure in Zaganelli's altarpiece of the Virgin and Child and Saints in the Brera Gallery (pl. CI, 1). Very large ones, like the pair described on no. 3, can be seen in Luca Signorelli's painting of Totila mounting his horse at Monte Oliveto.[1]

The other two breasts (on nos. 5 and 6) are built in one piece. No. 6 (pl. CXIV, 1) has a central ridge and movable gussets at the armpits; no. 5 (pl. CXIV, 2) has a

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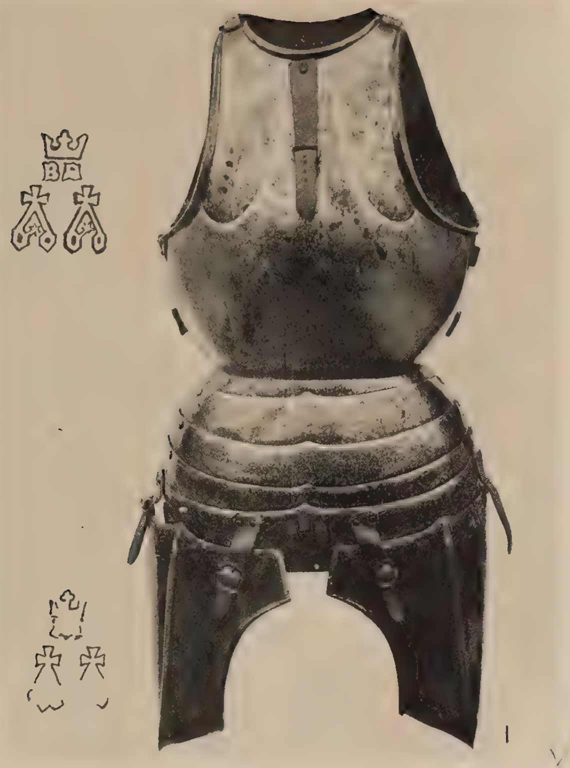
[1] *Archaeologia*, lxxx, pl. XXVIII, 1.



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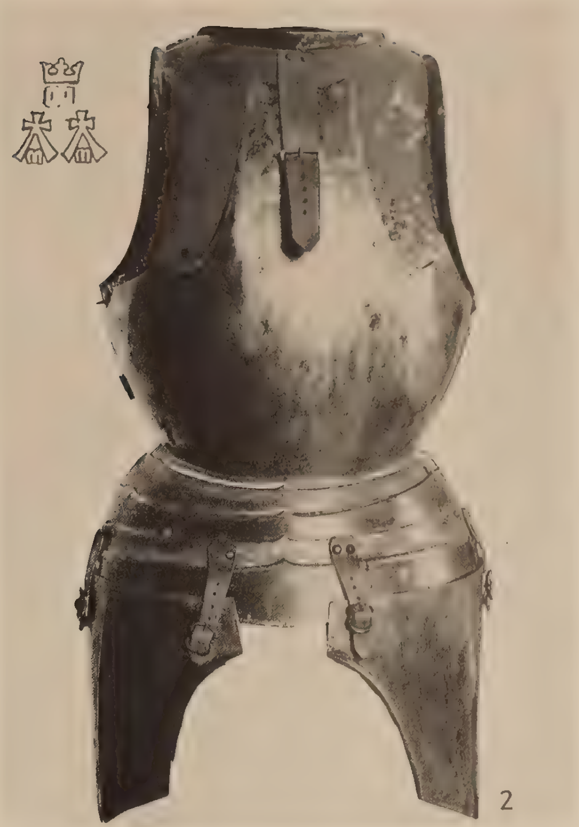

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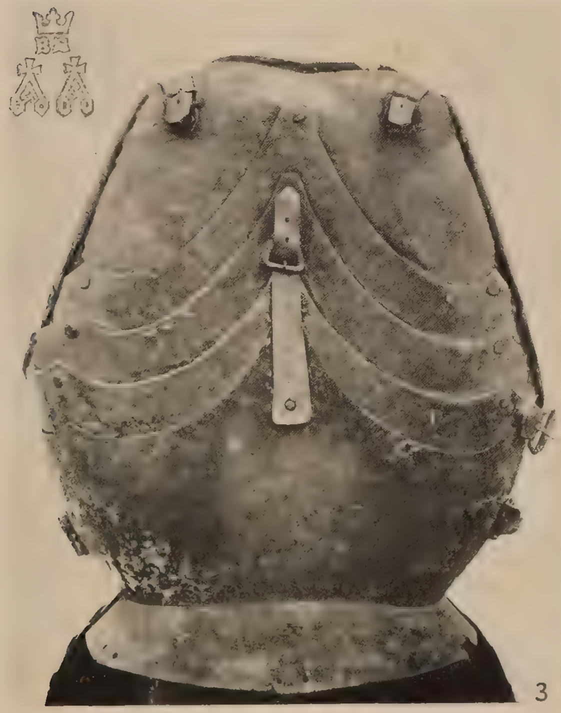

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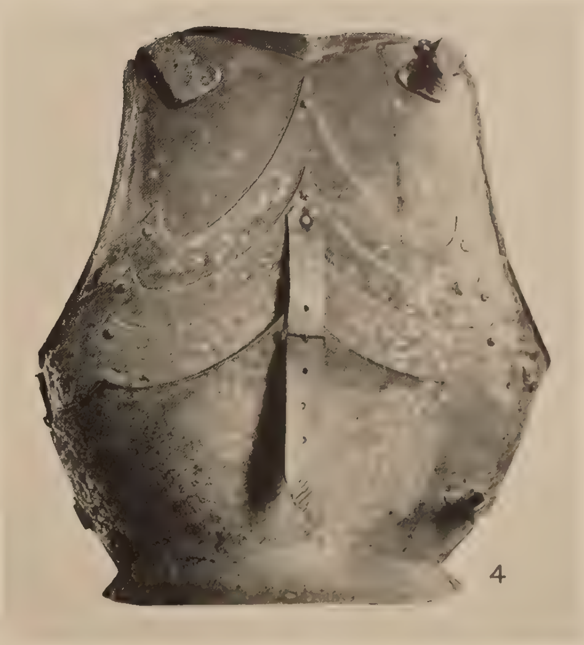

4

1. Cuirass and tassets of no. **2**
3. Backplate of no. **2**

2. Cuirass and tassets of no. **3**
4. Backplate of no. **3**

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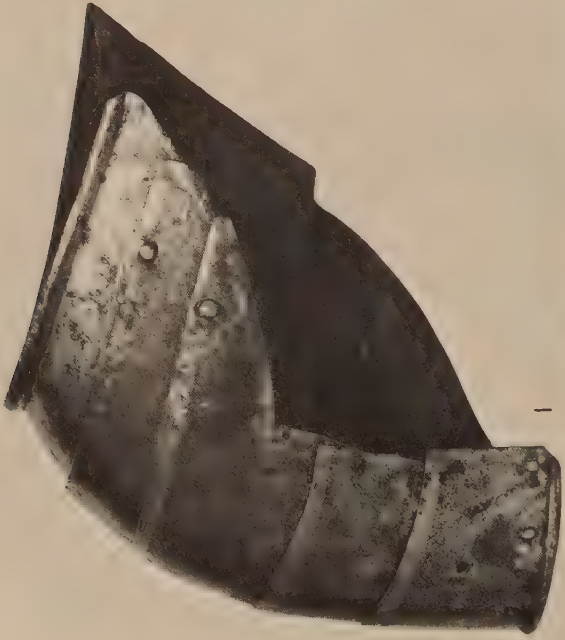

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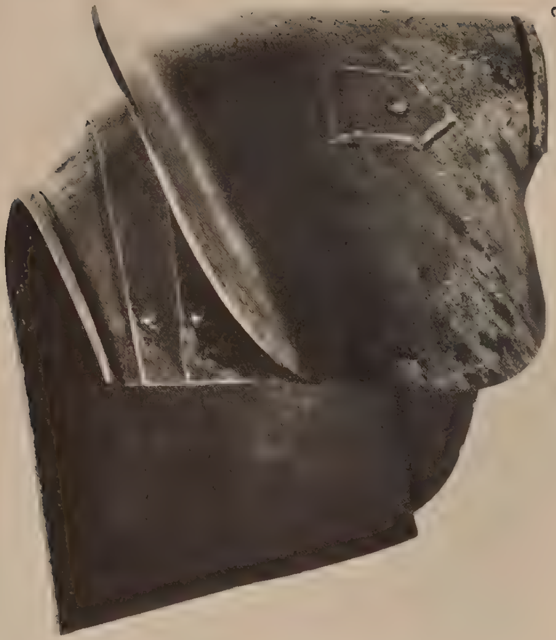

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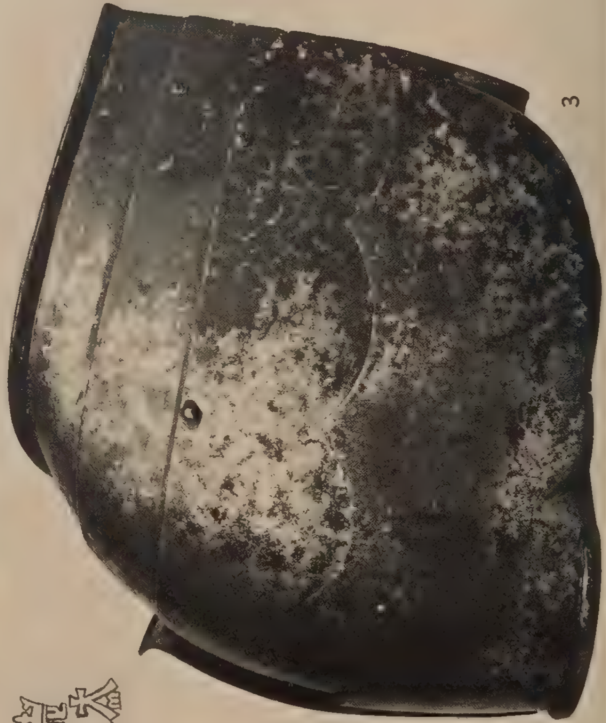

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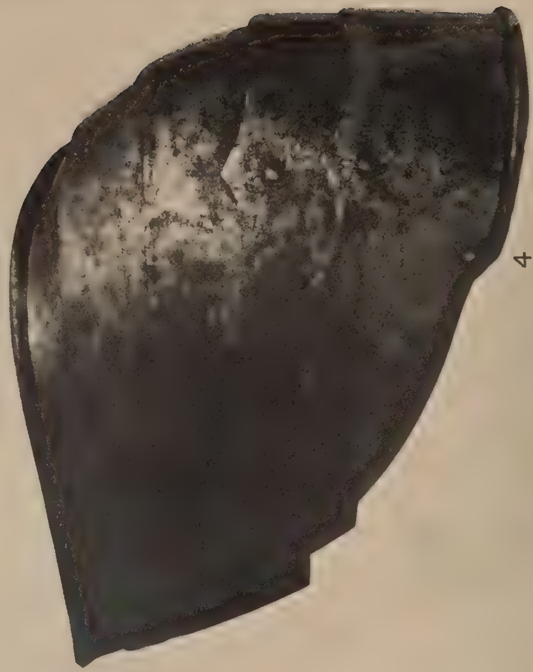

4

1-4. Right and left pauldrons, front and back views, of armour no. 1

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lance-rest bolted to its right side and holes for attaching one can be seen on the other. Both have three lames of a skirt. In the case of no. 6 the bottom lame is curved in the centre to follow the arched line made by the tassets, and the edges are not cusped. It is probably the later of the two and may date after the year 1500. It bears no mark. The other bears the armourer's mark (fig. 9) stamped on the bottom lame of the skirt. Breasts forged out of one piece are to be seen on the armour of Giovanni Fregoso at Vienna,[1] and in Giorgione's study for San Liberale, sometimes called 'Gaston de Foix', in the National Gallery.

Pauldrons. These provide a rich variety of those great enveloping defences described by contemporaries as *à la façon d'Italie.* On Verrocchio's statue of Bartolomeo Colleoni at Venice they are shown actually to overlap at the back, and the same can be seen on the back view of the armour of Roberto di San Severino at Vienna (pl. CXXX, 2). Their great size is well indicated on the warrior saint in Hugo van der Goes's panel of Queen Margaret of Scotland at Holyrood painted between 1469 and 1473.[2] They are illustrated here in detail, back and front, so that their construction can be gathered more easily than by verbal description (pls. CXV–CXVIII). In nearly every case they are built up of from four to six long lames curving round the shoulder-blades; to these are fixed by a single rivet or staple in front the shaped reinforcing plate, which had developed from the roundel of the earlier part of the century.[3] The reinforcing plate is larger on the left shoulder or bridle arm. There is a curious shield-shaped patch on the left pauldron of the first suit where the rivet attaches it to the pauldron beneath (pl. CXV, 2). In the case of the left pauldron of no. 2, the reinforcing piece is embossed with a diagonal rib, a feature illustrated on numerous English brasses of the middle of the century.[4] It occurs on the armour at Churburg no. 20, now Mr. Scott's, on the Dino suit (de Cosson Cat. no. A 1) in the Metropolitan Museum, and on the armour at Schwäbisch-Gmünd.[5] In place of a rivet, it is held, like the reinforcing plate of the elbow, by a staple or linch-pin. The upper edge of the reinforcing plate is bent outwards to defend the neck. The pauldrons of nos. 3 and 4 are similar in general build, though differing in minor details (pls. CXVI, 1–4, CXVII, 1–4). Similar pauldrons are on the armours of Ulrich VI Matsch and Galeazzo de Arco at Churburg (pl. CXXX, 1), and in a drawing by Giovanni Bellini in the Louvre executed about 1445. The lower lames at the back of the right pauldrons of nos. 1 and 5, and the left pauldron of no. 4, are prolonged into points, like those of the armour of Roberto di San Severino at Vienna (pl. cxxx, 2). The long extension of the pauldrons at the back is in most cases strengthened and made rigid by a narrow strip of iron or *lisière d'arrêt* riveted along it. In the case of the right pauldron on no. 5 (pl. cxviii, 2), its place is taken by an embossed rib beaten out from the lame itself. The upper borders of the lower lames at the back are in most cases escalloped. Articulation is by means of sliding rivets and straps, which can be clearly seen in the interior view on pl. cxviii, 5.

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[1] *Ibid.*, pl. XXIX, fig. 3; cf. also fig. 2.

[2] Laking, *Record*, i, fig. 235; the details are more clearly apparent in Henry Shaw's *Dresses and Decorations of the Middle Ages*, 1843, pl. 59.

[3] The earlier type of pauldrons with rondels, *c.* 1435, is reproduced in *Archaeologia*, lxxx, pl. xxv; Laking, *op. cit.*, i, figs. 219 and 220.

[4] *Archaeologia*, lxxx, p. 124, brasses of Richard Fox, *d.* 1439, and Richard Dyxton, *d.* 1438.

[5] *Ibid.*, lxxxiv, 87, pl. XXVIII.

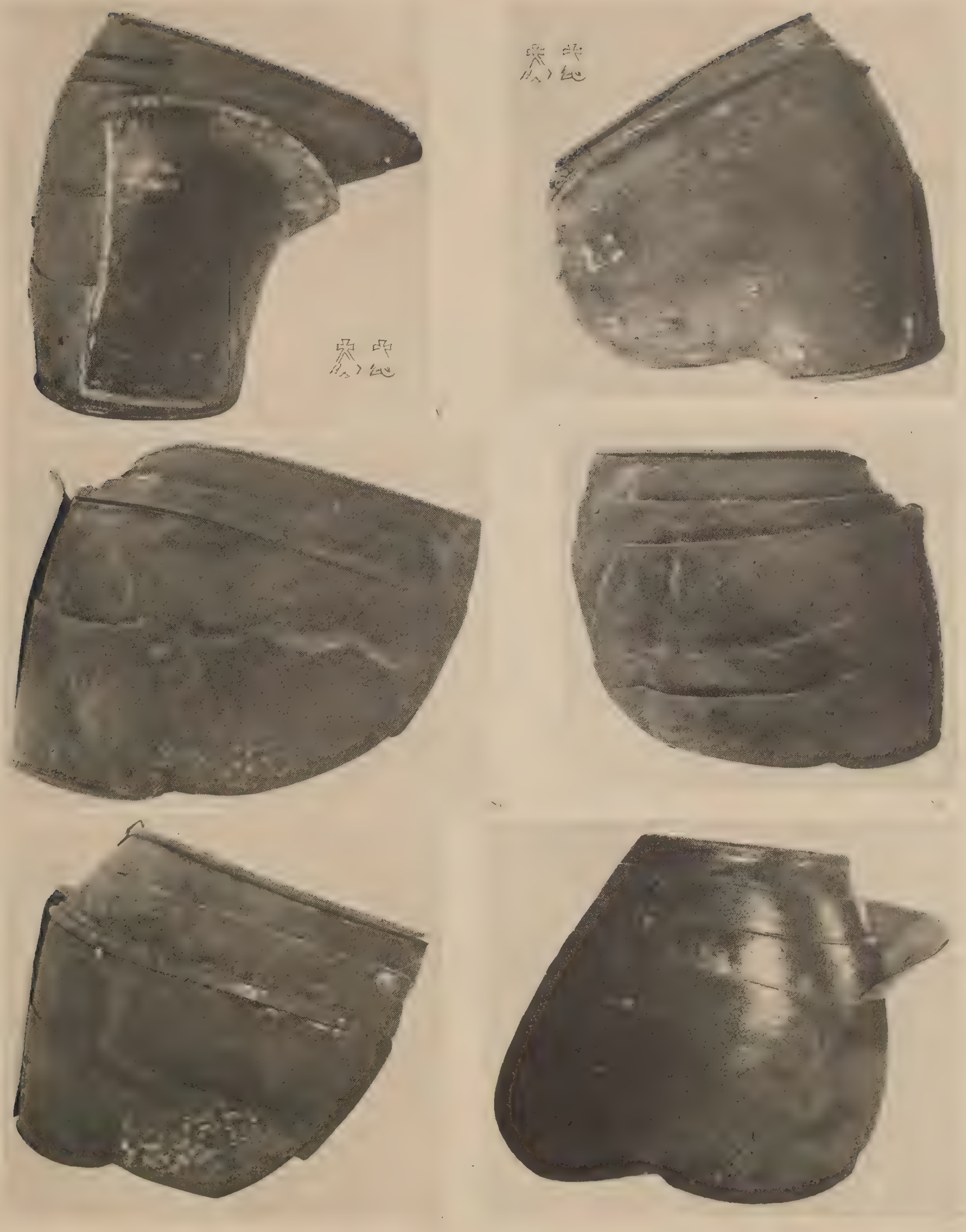
These large pauldrons were quite independent of the vambraces, as is shown in many contemporary illustrations, where the loose mail sleeve of the hauberk worn beneath the armour of plate is allowed to fall over the upper part of the vambrace (pl. ci, 2).

The very large reinforcing plate of no. 5 (pl. cxviii, 4) is of great size, covering the whole of the pauldron in front, and fits closely over the upstanding guard which extends from the main plate of the pauldron. There was a large guard of this kind among the quattrocento pieces which passed through the Simonetti and Franchetti collections, but it had been separated from the armet and gauntlet when these were sold at Sotheby's in 1929. Compare the large guard on the armour signed by Negroli in the Musée de l'Armée, no. G 10. High guards of this kind worn with armets are portrayed in the ranks of men-at-arms in the contemporary painting of the battle of Pavia, 1525, in the Ashmolean Museum at Oxford.[1]

In the case of the left pauldron of no. 6 (pl. cxvii, 6), a reinforcing plate of this kind is absent, but two holes show where it could be bolted. This pauldron is fluted at the back and its lower lames fit closer to the upper arm than is the case with pauldrons of the earlier and more voluminous type, which were quite independent of the vambraces. This pauldron and the right pauldron of no. 2 (pl. cxiv, 6) are of inferior quality to the others.

Vambraces. The anonymous fifteenth-century author of the manuscript account 'Du Costume militaire des français en 1446', published in 1866 by the Comte de Belleval, stated that in his time there were two sorts of armour for the arm, '*Les ungs et les plus comuns qui se font à Milan, qui se tiennent des pièces ensemble depuis la jointure de la main jusques à quatre ou à six doiz près la jointure de lespaulle haute.*' The other kind '*sont faiz en trois pièces*'. It is the first that is represented here. The vambrace in each case consists firstly of an upper cannon, which nearly envelops the arm and was laced through a hole at the top to the sleeve of the arming doublet; secondly, a couter or elbow cop, articulated by one lame above and two below; and, thirdly, the lower cannon, which is formed of two parts hinged together and closed round the forearm in the Italian manner by means of a strap and buckle instead of a pin and hole. The

[1] Charles ffoulkes, *European Arms and Armour in the University of Oxford*, 1912, pl. I.



1 and 2. Right and left pauldrons of no. **3** 3 and 4. Back view of pauldrons of no. **3**
5 and 6. Back view of left and right pauldrons of no. **2**

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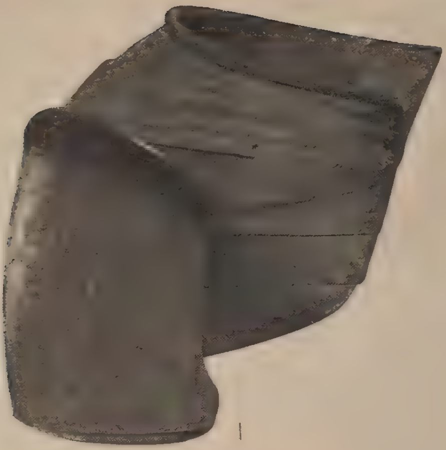
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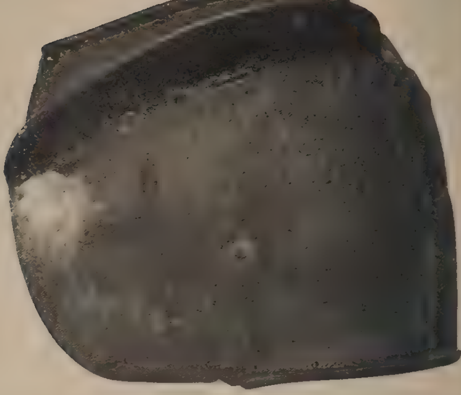
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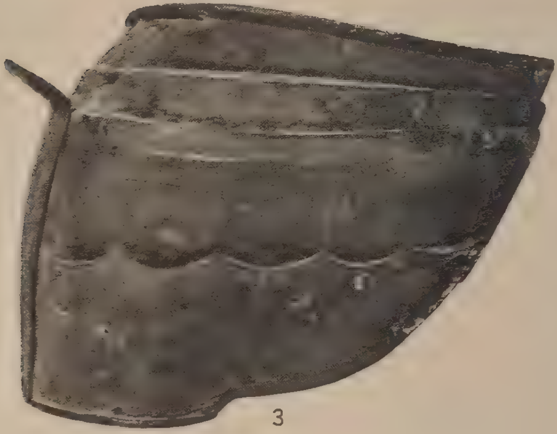
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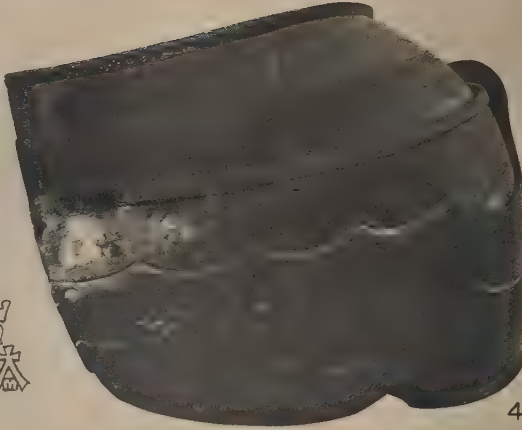
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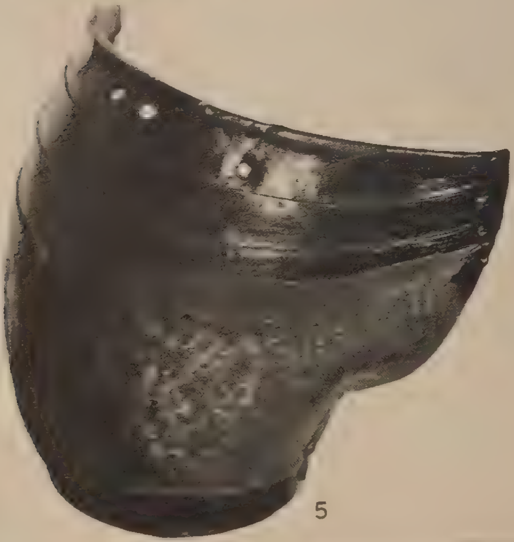
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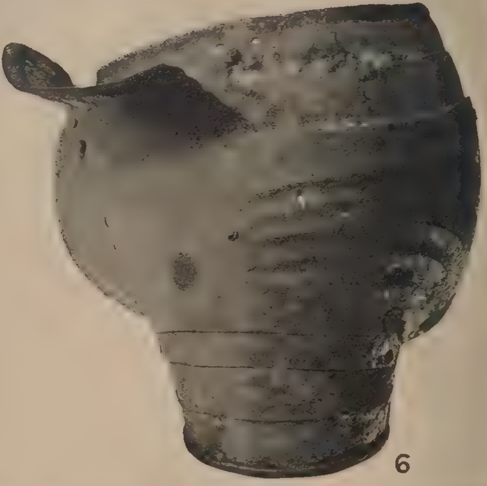
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1 and 2. Right and left pauldrons of no. 4

3 and 4. Back view of pauldrons of no. 4

5. Right pauldron of no. 2

6. Left pauldron of no. 6

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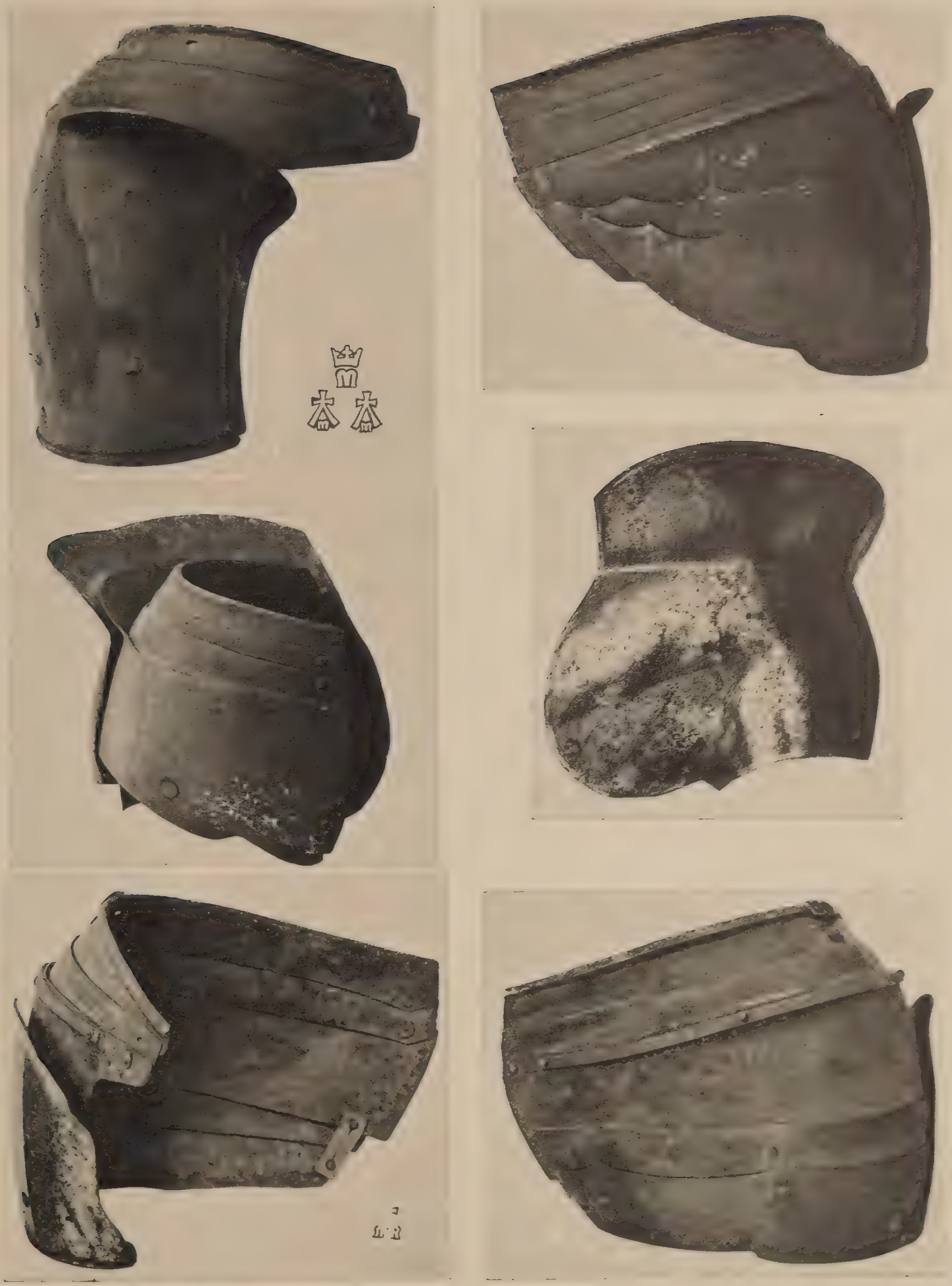

1 and 2. Right pauldron of no. **5** 3. Left pauldron of no. **5** 4. Reinforcing piece of left pauldron of no. 5
5. Inside of right pauldron of no. **6** 6. Back view of right pauldron of no. 6

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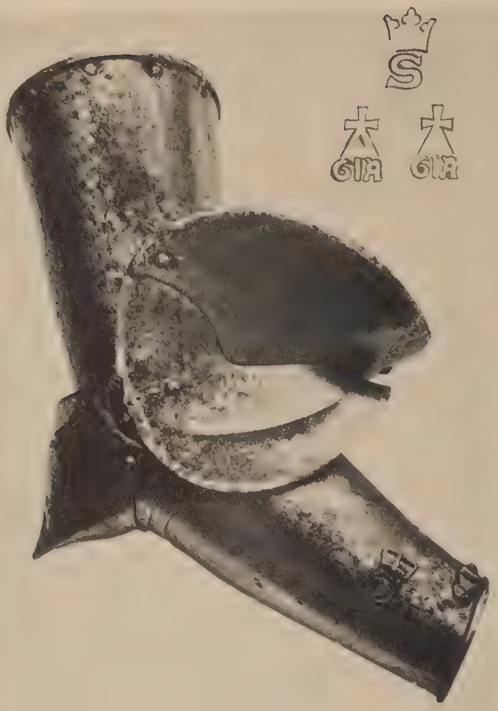

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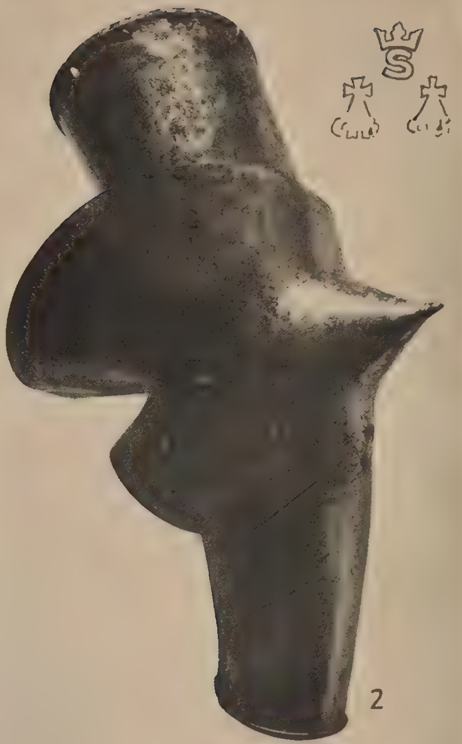

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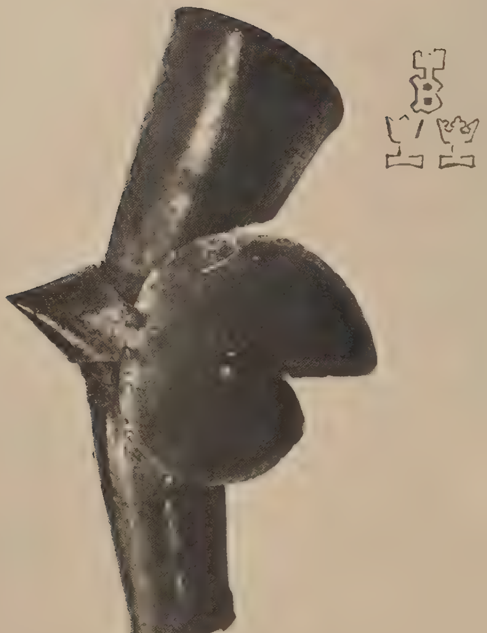

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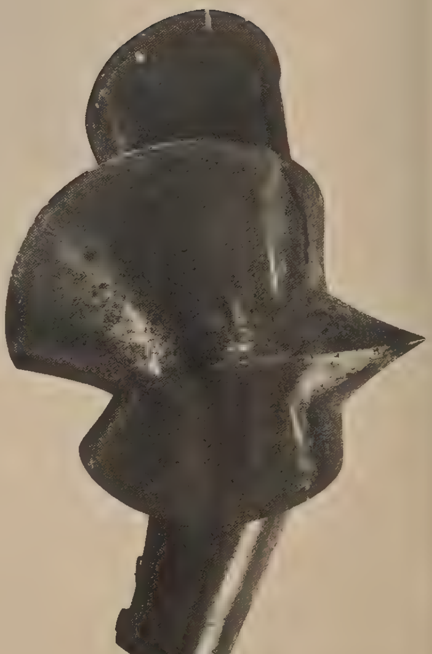

4

1 and 2. Right and left vambraces of no. 1

3 and 4. Right and left vambraces of no. 2

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borders at shoulder and wrist are turned over to obviate a sharp edge. On three of the suits (nos. 1, 2, and 3), as now arranged, the vambraces exemplify the fully developed system of the Italian quattrocento, being bold and unsymmetrical in outline, with a big reinforcing guard added to the left elbow. But in no two cases are they exactly alike. The guard of no. 3 is embellished with shell-like ridges (pl. CXX, 2), almost the only form of decoration which Italian armour of this period permitted itself. It is well shown on the bronze effigy of Richard Beauchamp, earl of Warwick, in St. Mary's, Warwick. Pl. CXIX, 4, shows one of these wings in position, and pl. CXX, 4, the same arm with the wing removed, revealing the pointed couter with a small side wing of its own over which the other fits tightly.[1] It seems likely that a large additional guard is missing from the left arm of the armour of Frederick the Victorious at Vienna, and that its neat couter is really only the inner defence.

The elbow defences of the right, the more mobile arm, are formed differently. The couter itself is small and acutely pointed, and the inner bend of the joint is protected by a large heart-shaped wing,[2] which is reinforced by a close-fitting additional plate riveted on to the upper half. This occurs on the armour of Frederick the Victorious at Vienna, and that of Ulrich VI Matsch, at Churburg (Cat. no. 19), and is clearly shown on English brasses of the type of Richard Fox, *d.* 1439, at Arkesden, Essex,[3] or William Wadham, *d.* 1452, at Ilminster, Somerset. In one case (pl. CXIX, 1) the edge of this reinforcing piece is serrated.

The arms of the fourth Gothic suit are less striking in their outline. The left elbow (pl. CIII, 2) has only a small reinforcing guard, although the principle is the same, and the right one (pl. CXXIX, 2) also is smaller, but still has the reinforcement of the upper part of the tendon-protector.

The arms of the other two suits, nos. 5 and 6 (pl. CXXIX, 3, 1), are symmetrical and much simpler, being built up of upper cannon, couter with heart-shaped wing in one piece with it, and lower cannon. The fashion for large irregular defences on the arms had passed in the closing years of the fifteenth century. Arms of this kind are depicted in Pier Francesco Sacchi's painting of St. George and the Dragon in the convent church of the SS. Anunziata at Levanto.

Gauntlets. There are three pairs and a half of fifteenth-century gauntlets in the Sanctuary, and a further pair of the sixteenth century. Two of the pairs and the single gauntlet of the fifteenth century have the long, pointed cuffs with sharp central ridge, and plain shell-like mittens, characteristic of Italian armour of the fifteenth century (pl. CXXI, 1, 2, 3). They succeeded the shorter gauntlets with bell-shaped cuffs worn in the first half of the century. Sir John Cressy's accounts have told us that in England a pair of Italian gauntlets cost 5*s.* 8*d.* in 1441. Except in battle scenes, gauntlets are rarely shown in contemporary paintings, where the hands are usually represented bare, but an exception is the portrait by Dosso Dossi of Ercole I d'Este, duke of Ferrara in the R. Galleria Estense at Modena.[1] The gauntlets for the right hand are built up of a cuff and three broad lames for the hand: the gauntlets for the left hand, of a cuff and two lames only for the hand. This arrangement also occurs on the gauntlets of Frederick the Victorious. In the case of no. 2 the edges are bevelled. There seems no apparent reason for the square notch cut in the edge of the lame of the left hand. The base of the thumb is protected by an arched projection in one with the lame which covers the back of the hand. Gauntlets of this type were usually finished with mail gloves, as seen on the intarsia panel of Federigo da Montefeltro's study, already referred to.[2] There are two which retain their mail in the Musée Valère at Sion in Switzerland.

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[1] Cf. that from Chalcis illustrated by Mr. C. J. ffoulkes in *Archaeologia*, lxii, pl. LV, and Sir Edward Barry's, Laking, *Record*, i, fig. 236; Laking wrongly describes the latter as being 'of Italian form but German make'. Its form is typically Italian and it bears an Italian armourer's mark of a split cross, stamped twice.

[2] '*Façonnée presque en la façon d'un cœur.*' Comte de Belleval, Du costume militaire des français en 1446.

[3] *Archaeologia*, lxxx, 124, fig. 4.

The two gauntlets worn with armour no. 6, illustrated on pl. CXXI, 4, present another type. The cuffs are shorter, and the borders relieved by a sunk band. The mittens are fluted in an angular way roughly corresponding to the position of the fingers, and are built of six overlapping lames joined to each other, and rendered flexible by rivets at the sides. They are not strictly a pair. This type of gauntlet is often called Spanish from its occurrence on Spanish Gothic armour at Madrid. But it is also found in Italy, where much armour was made for the Spanish market. A gauntlet of this kind was sold with the armet and wrapper formerly in the Simonetti and Franchetti collections at Sotheby's in 1929.[3] Their date must be about the year 1500.

Leg-harness. Armour for the legs is much rarer than armour for the trunk. Being separate from the upper part, and requiring a full-length dummy if it is to be properly mounted, it easily becomes detached and lost, whereas armour for the trunk can hang together on a simple cross-piece. We have seen that the price of a pair of legs in England in 1441 was 20*s.* The earliest existing homogeneous armour, that at Churburg (Cat. 1929, no. 13), lacks its legs, and so do many other famous suits that once possessed them. Both M. Pauilhac and Signor Marzoli possess fine examples of detached leg harness of the fifteenth century, resembling those in the Sanctuary in construction, but stamped with

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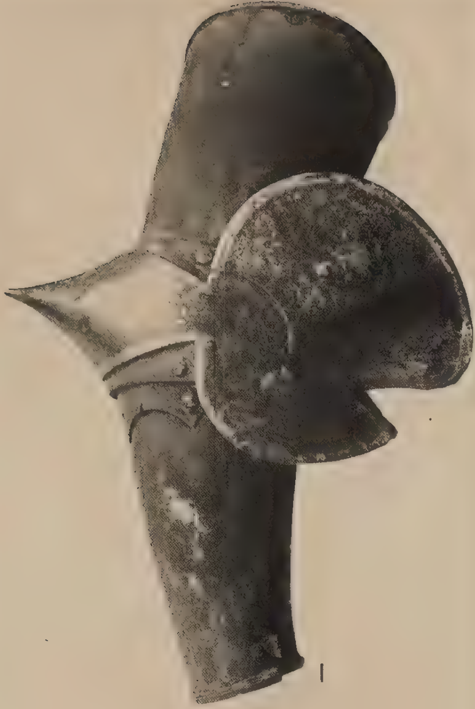
[1] Mann, *Arch. Journal*, vol. xcv, pt. 2, 1938.

[2] *Archaeologia*, lxxx, pl. XXX, 2.

[3] Sotheby's, 'Arms and Armour the property of a gentleman', 20th June 1929, lot. 133, pl. VII; cf. Conde Valencia de Don Juan, *Catálogo de la Real Armería*, Madrid, 1898, A 6, and the armour of Philip the Fair, *ibid.*, A 11; also on a Spanish composite suit belonging to M. Pauilhac, *Archaeologia*, lxxx, pl. LXXXIX, 2.



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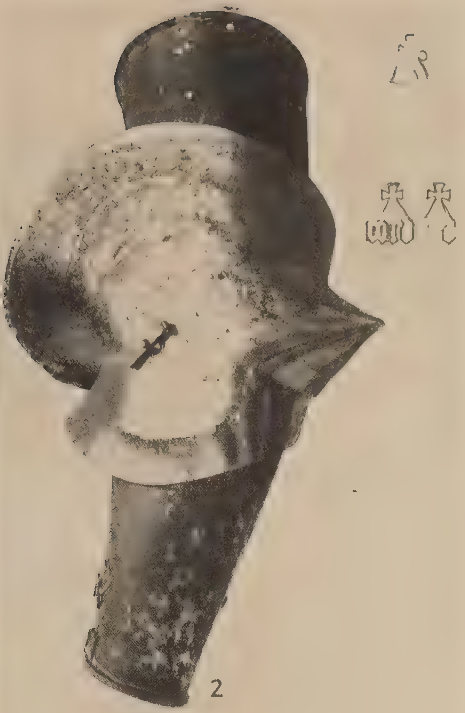

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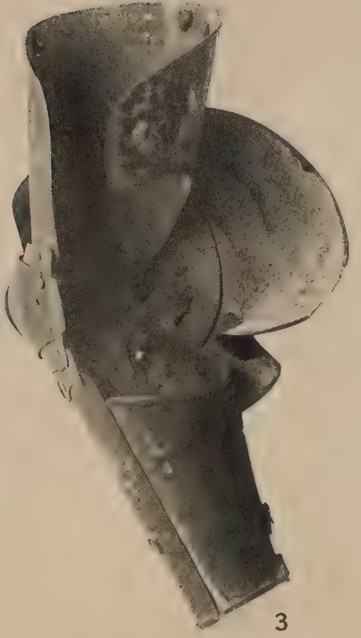

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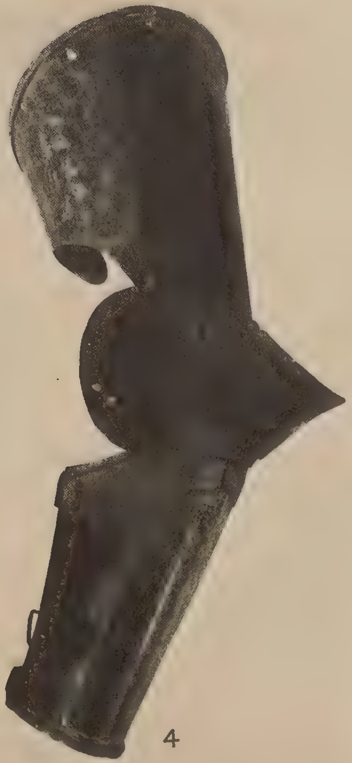

4

1 and 2. Right and left vambraces of no. 3 3. Inside of left vambrace of no. 3
4. Left vambrace of no. 2, without the additional elbow-guard

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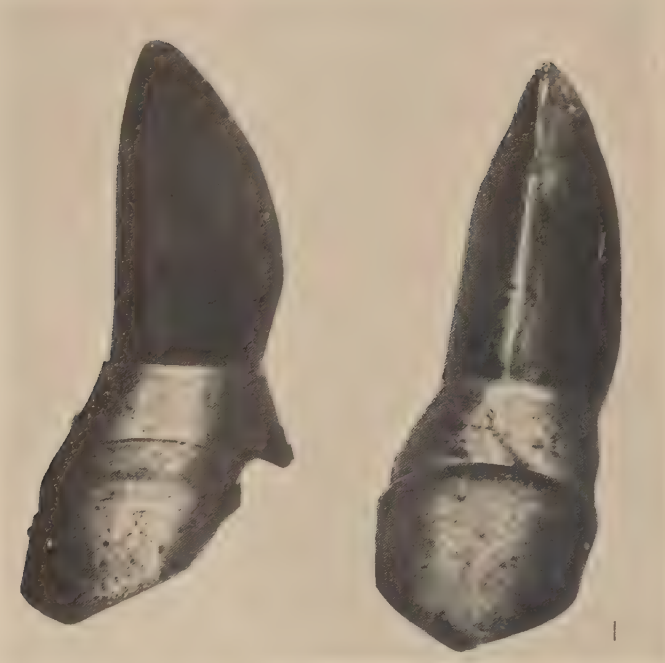

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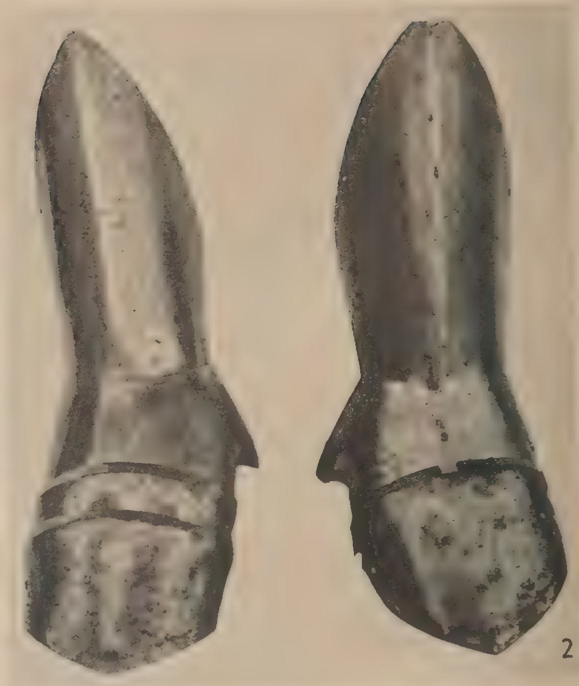

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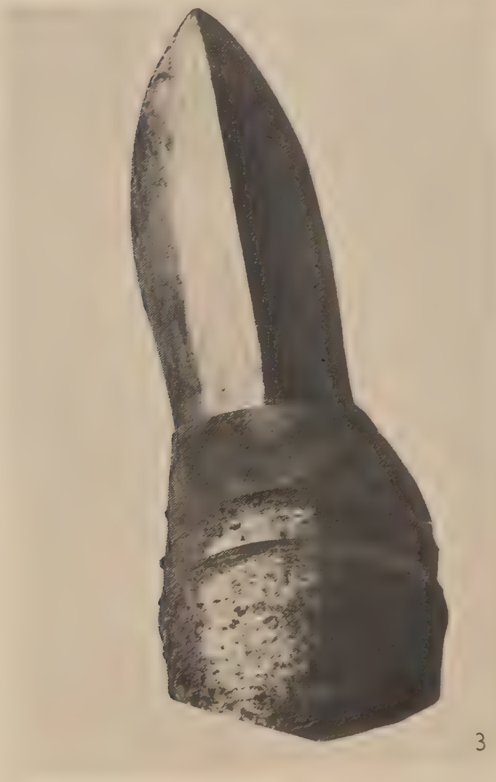

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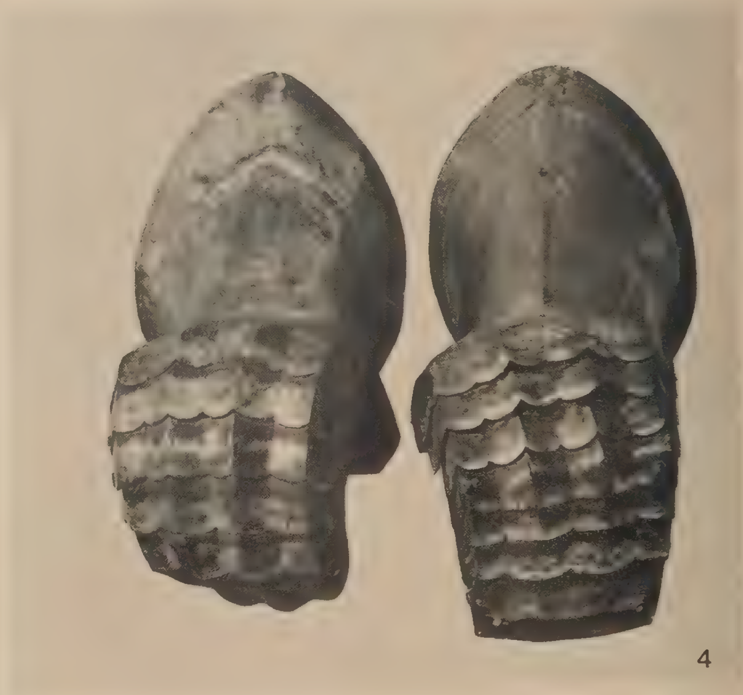

4

1. Gauntlets of no. 1, of the fifteenth century
3. Gauntlet for the right hand of no. 3, same period

2. Gauntlets of no. 2, same period
4. Gauntlets of no. 6, c. 1500

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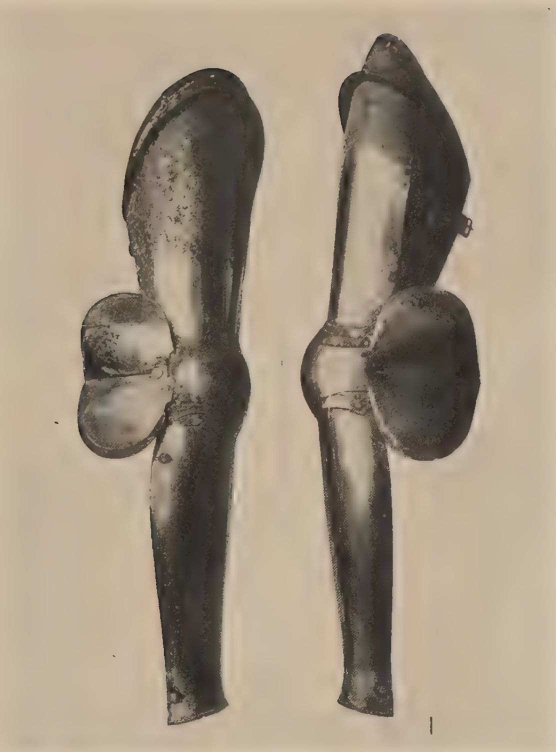

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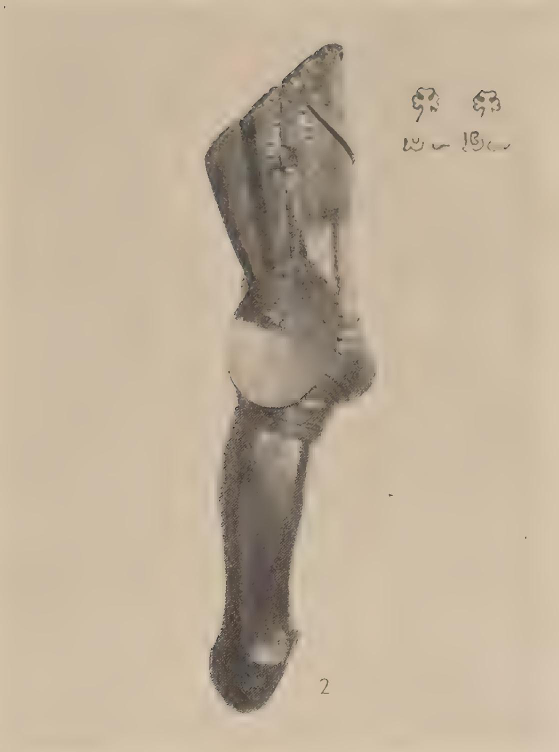

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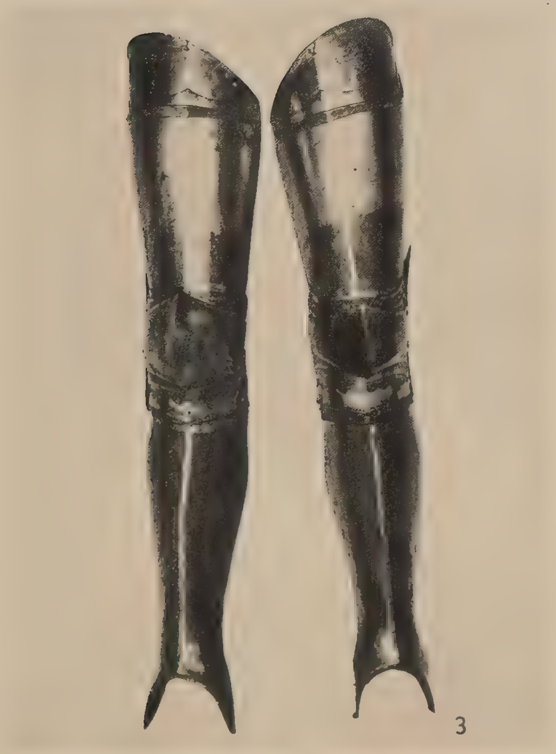

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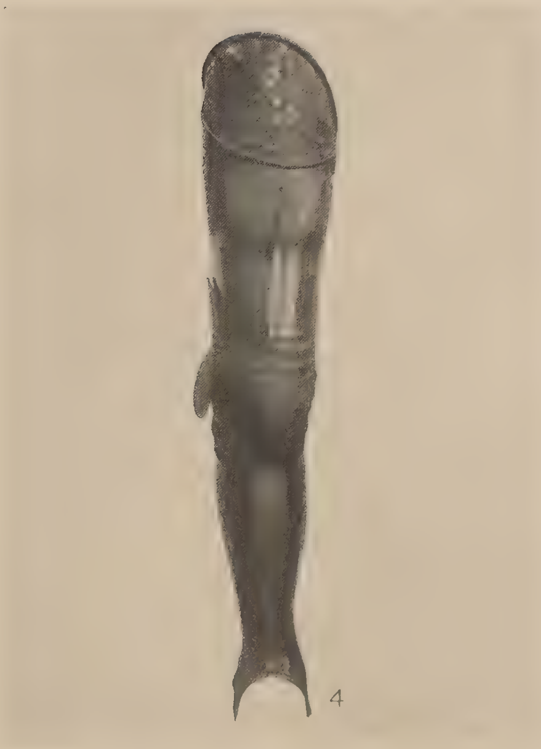

4

1. Legs of no. **6**
3. Legs of no. **1**, front view

2. Right leg of no. **2**, side view
4. Right leg of no. **2**, front view

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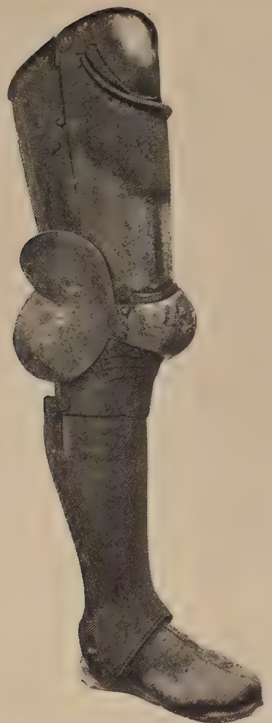

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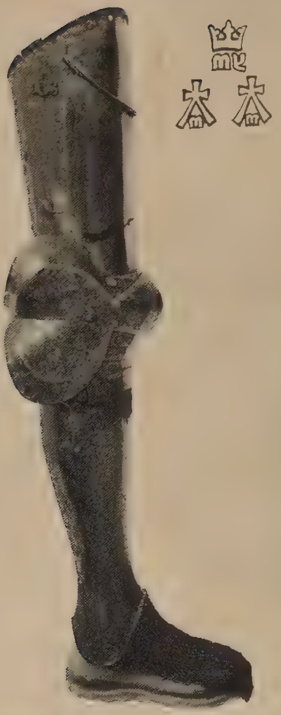

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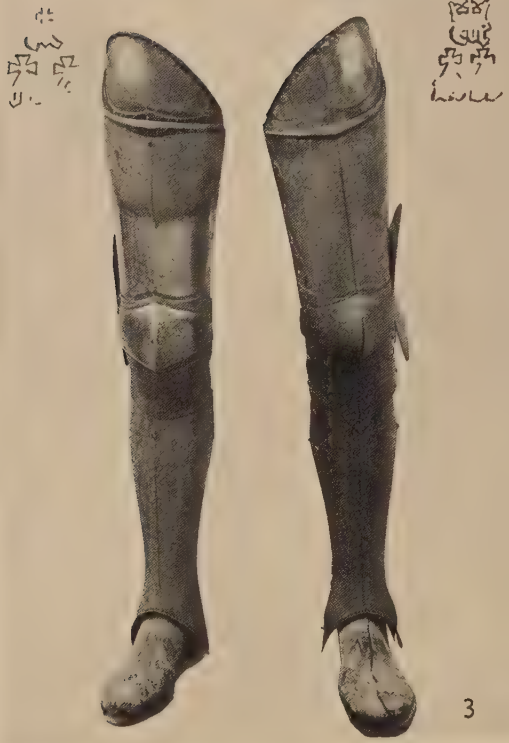

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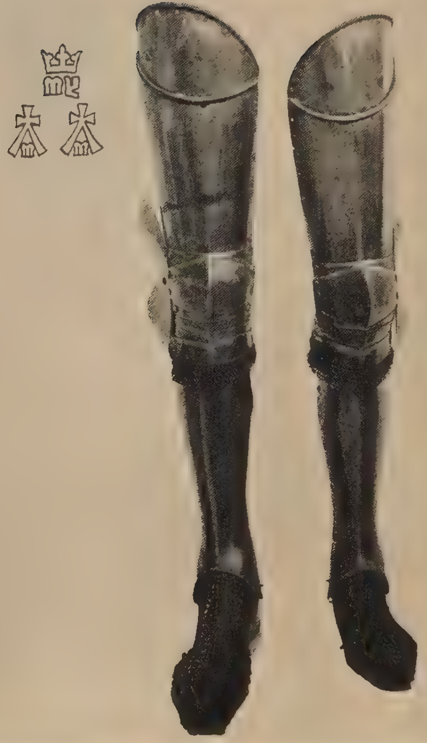

4

1. Right leg of no. **5**
3. Legs of no. **5**, front view

2. Right leg of no. **3**, with mail fringes
4. Legs of no. **3**, front view

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other armourers' marks. The fortunate survival in the Sanctuary of six sets of leg armour of the fifteenth century is due to the fact that the armour has always been mounted on full-length dummies. Thanks to this, we have here the most complete pair of Gothic legs in existence (pl. CXXIII, 2, 4). Mail fringes at the knee were an Italian fashion, of no practical value, but of long duration, which goes back as far as Simone Martini's fresco of Guidoriccio da Foligno in the Palazzo Communale at Siena of 1328. The 'Avant' suit, formerly at Churburg (Cat. 1929, no. 20), and now in the possession of Mr. R. L. Scott, at Greenock,[1] is the only other known to me with its original mail shoes, but it has no mail at the knees. I have already mentioned the pair of fifteenth-century legs of the armour from the church of San Niccolò at Tolentino, which retained the fringes at the knees, but not at the insteps. Their present whereabouts are unknown. Other examples of mail fringes at the knee exist, but are of doubtful antiquity, for it has been a favourite trick of restorers to add these valences, often much too long, where they never previously existed. False restitutions can generally be detected by the holes pierced in the bottom lame of the poleyn for their suspension. Four pairs in the Sanctuary show the extra lame, overlapping upwards instead of downwards, from which they were hung. Two of these on nos. 1 and 2 still retain a few odd rings of their mail fringes. As with the rest of the fifteenth-century armour in the Sanctuary, no two examples are exactly alike.

The art of forging a fine pair of legs was one of the most difficult operations in the craft, and the subtle contours of calf and ankle, and of the profile of the shin, are here seen at their best. The cuisses are built of a main plate covering most of the thigh, and a top plate, which usually carries the armourer's mark, while between them there is generally a narrow articulating lame. This arrangement succeeded the earlier one of cuisses of one plate, and allowed them to extend far up to the groin. The main plate has hinged to it along the outer side two or more narrow, vertical, boxed plates, which close round the back of the thigh.[2] The top lame comes well up the thigh on the outer side and slants towards the groin, the edge being turned over and pierced for the leather lining, which is laced by points in the same way as long hose. The upper edge of the main plate is turned over to form a prominent stop-rib or *lisière d'arrêt*, curved in a convex U-shape to deflect blows from reaching the groin when the leg is bent in the saddle. In contradistinction, the narrow intermediate lame, connecting the main thigh-plate to the top plate, is generally cut to a point or cusp in the centre where it crosses the central ridge. The subsidiary plates hinged round the back of the thigh are still present on the right legs of nos. 2, 3, 5, and both legs of 6.

The poleyn is articulated by narrow lames twice above and three times below, the bottom lame being longer, and carrying the narrow extra plate from which the mail fringe, where present, hangs. At the outside of each knee is a heart-shaped wing, in the case of no. 3 (pl. cxxiii, 2), finely moulded with bevelled planes to the borders. Those of nos. 2, 4, and 5 (pls. cxxii, 2, 4, cxxiii, 1) are plain.

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[1] *Archaeologia*, lxxx, pl. XXVI, fig. 5.

[2] Cf. those found at Chalcis, *Archaeologia*, lxii, pl. LV, 3.

Two pairs of legs had to be reconstituted, as they had been separated by making two rights and two lefts serve as partners. A side wing had been forcibly transferred to the wrong side of the poleyn in each case, to give an appearance of symmetry to the knees, although the slanting upper line of the cuisse made the transposition obvious. The true pairs were identified by the invected border of the cusped intermediate lame of one pair (now on no. 2), and their respective armourers' marks (figs. 58–9, 60), and they are now mated again, though in the course of their vicissitudes an articulating lame is missing from the left leg of no. 2. On the cuisses of no. 1 (pl. cxi, 4) the boxed border of the main plate of the cuisse, which serves as a stop-rib, slants obliquely in a double curve. The same feature is to be seen on the cuisses of the armour of Roberto di San Severino at Vienna.

The arched lower edge of the greaves of nos. 1, 2, and 5 (pls. cxxii, 3, 4, cxxiii, 3) are each pierced with a row of holes for the attachment of mail shoes such as have survived in the case of no. 3. In the case of no. 6 (pl. cxxii, 1) the curve of the *lisière d'arrêt* is concave instead of convex, and bent over to a hollow section. They resemble a leg from the arsenal at Rhodes in the Tower of London. This feature is also seen on a pair of cuisses in the Wallace collection, nos. 51 and 60, which, having fluted wings and etched and gilt ornament, probably date from *c.* 1510. The side wings to the knees of no. 6 are very large; the rear plates of the greaves, which cover the calf of the leg, are missing. The greaves are cut off straight round the ankle instead of having an arch over the instep. This is a characteristic of Italian armour of the sixteenth century, where mail shoes continued to be preferred to sabatons of plate.

The Armourers' Marks on the Six Gothic Suits

The credit for first including reproductions of armourers' marks in a catalogue raisonné must go to Don José María Marchesi, who appended ten pages of marks to his *Catálogo de la Real Armería* published at Madrid in 1849. The idea was probably suggested to him by the tables of marks of the swordsmiths of Toledo published by Palomares in 1762, and of the gunmakers of Madrid by Isidro Solér in 1795, both of whose plates he incorporated with his own. Théodore Graesse included a number of armourers' marks, chiefly from the armoury at Dresden, in his compendium of marks and monograms of various artists and craftsmen, painters and goldsmiths, of which the first edition was

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[1] C. J. ffoulkes, 'Armour in the Rotunda', *Archaeologia*, lxxviii, pl. xiv.

published in 1871.[1] He reproduced among them the crowned MY mark, which he described as that of an '*armurier inconnu italien*'. But it was left to Dr. Wendelein Böheim,[2] Custos of the Imperial Armoury at Vienna, to make the first effective step in the history of the craft by connecting this mark with one of the foremost armour families of Milan, when he recognized the same monograms carved on a capital (fig. 2) in the Via Spadari in that city, and discovered that this had once been the house of the Missaglia. The building, which had seen many changes, and in its latter years had become a tenement known as the '*porta dell' inferno*', was finally swept away in 1901 in the course of civic improvements. The pillars, some of the terracotta surrounds of the windows, and a copy of the paintings on the wall are preserved in the museum in the Castello Sforzesco.

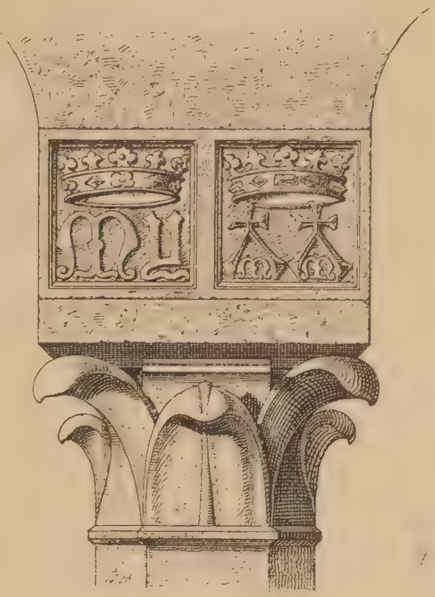
Fig. 2

Professor Putelli has published evidence showing that as late as 1609 the small villages in the district round Brescia and Bergamo specialized in the roughing out of certain parts. A weekly market took place at Pisogne on the Lago d'Iseo where merchants came from Milan, Brescia, and places farther afield to buy armour. Cavaliere Luigi Marzoli has drawn the writer's attention to an armourer's house of the sixteenth century in the Via Pignolo at Bergamo, known as the Casa Mazzolini Cassotti, and has kindly communicated photographs of it (pl. CXXIV, 1–3). The pillars of the courtyard are carved with appropriate emblems of axes, maces, and an arm in armour holding a mace, together with monograms, one of which is formed of the letters ЯR and perhaps T as well.[3]

The late M. Charles Buttin in one of his monographs[4] suggested that the presence of a triple mark, or a double mark without the surmounting mark, indicated armour of double proof that had been proved with the windlass crossbow. A single mark meant that it had been proved by a crossbow of less power. Two marks disposed for symmetry on either side of the back of a helmet count as a double mark.

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[1] J. G. Théodore Graesse, *Guide de l'amateur d'objets d'art et de curiosité, ou Collection de monogrammes des principaux sculpteurs, armuriers, orfèvres*, Dresden, 1871; 2nd edition, 1877. It was dedicated to Sir Augustus Wollaston Franks. The crowned MY reproduced by him on p. 33 would appear to be taken from the jousting armour of Gasparo Fracasso at Vienna. Cf. also *ibid.*, p. 47, for other Milanese marks.

[2] Böheim, *Jahrbuch der K. H. Sammlungen*, ix, 1889, p. 384; Gelli and Moretti, *Gli armaroli Milanesi, i Missaglia e la loro Casa*, 1903, which gives plans and drawings of the house.

[3] Compare the mark given in fig. 54 *infra*.

[4] C. Buttin, *Notes sur les armures à l'épreuve*, Annecy, 1901.

It is important when reproducing marks that the relative positions of adjacent stamps should be preserved, and that individual marks should not be reproduced independently of their companions. The student of armourers' marks often finds himself handicapped by the varying accuracy of reproductions, as well as by the state of preservation of the marks themselves. I should like here to thank M. Pauilhac of Paris and Mr. Stephen Grancsay of the Metropolitan Museum, New York, for the trouble which they took in furnishing me with careful and complete impressions of marks on the Italian armour in their care, and which has been of much service to me in the study of the marks in the armour in the Sanctuary. In the following pages the marks stamped on armour in the Sanctuary are shown within a rectangular frame to distinguish them from marks on armour elsewhere which have been included for comparison.

It has been suggested that the surmounting mark of a group of three represents the city or guild, and that the lower marks are the personal ones of the maker. Alternatively, we know that it was customary to contract out work to specialists in various pieces, who would very likely put on their own mark, after which the firm which commissioned the work would add theirs. This seems to be borne out by the great variety of marks found on homogeneous suits of undoubted pedigree, and also by the fact that the same marks occur under different surmounting marks and *vice versa*.

Until recently all marks of this character were ascribed indiscriminately to the Missaglias. But the only fact as yet definitely established is that the crowned MY[1] and M within a split cross were carved in a prominent place on the Casa Missaglia at Milan, and must therefore have some connexion with that family. These monograms (fig. 3) are stamped on much armour of the fifteenth century and continued to be used until the early years of the next.[2] The same observation applies to the letters A.N under an abbreviation sign which formed part of the painted decoration of the walls of the Casa Missaglia. They are to be seen stamped as a mark on the armour of Frederick the Victorious at Vienna, and have been tentatively ascribed to Antonio Missaglia, who was associated with his father, Tommaso, from about 1450, and subsequently directed the firm until his own death in the nineties.

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[1] In the *Burlington Magazine* of Nov. 1919, the late Mr. S. J. Camp followed Böheim in maintaining that these initials were MP, for Petraiolo Missaglia, the founder of the firm in the fourteenth century. In the correspondence that followed (*ibid.*, Jan., Feb., and March, 1920), the Baron de Cosson gave it as his considered opinion that the letters are MY, and that Y, though not used in the Tuscan, has a place in the Lombardic alphabet. This is confirmed by the form of the Sacred Monogram YHS which is stamped as an armourer's mark on the sabatons of a fifteenth-century armour in the Wallace collection, no. 340. When P was intended it took another form, e.g. figs. 44, 50, 51, *infra*.

[2] See pp. 334 and 336.

The crowned MY above a pair of split crosses enclosing M's appears seven times in the Sanctuary, viz. on the pauldrons of no. 1,[1] on one of the tassets of no. 3, and on the top lames of the pair of cuisses which have mail fringes at the knees (no. 3). Outside the Sanctuary this group is found on the helm and sabatons of the armour of Frederick the Victorious and on the cuisses of that of Roberto di San Severino at Vienna, and it occurs three times on the armour of Galeazzo de Arco at Churburg (fig. 4).[2] Frederick died in 1476, San Severino fell at the battle of Calliano in 1487, and Arco, who had supported in the field the bishop of Trent in 1448, died before 1482. His armour bears its owner's name punched upon it in contemporary *pointillé* lettering.

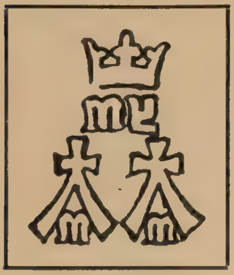

Fig. 3

These three marks (but with the MY without a crown (fig. 5)) occur on the gauntlet of the 'Avant' suit, which was at Churburg[3] until 1932, and is now in the collection of Mr. R. L. Scott at Greenock. One is tempted to suggest that the absence of the crown means that it dates from before 1435, the year in which Tommaso Missaglia was ennobled by the duke of Milan.

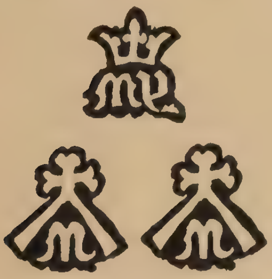

Fig. 4
Churburg (Arco)

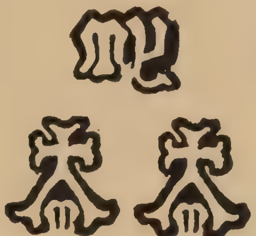

Fig. 5
Churburg (Avant)

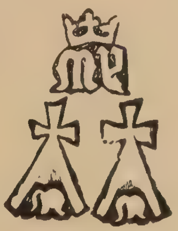

Fig. 6
Berne

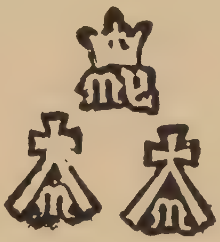

Fig. 7
New York

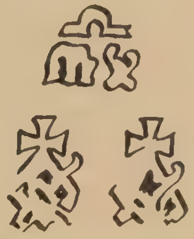

Fig. 8
Scott

They also appear in their usual form on cuirass, tassets, reinforce of right pauldrons and cuisses of the fine Milanese armour at Berne, and twice on the pauldrons and once on left pauldron and greaves (fig. 6). Readers of the Baron de Cosson's account of 'Arsenals and Armouries in Southern Germany'[4] will remember how he discovered the legs of this suit on another figure, and had them reunited in much the same way as the various components have been assembled in the Sanctuary.

[1] These were at one time combined with no. 3, but put back on no. 1 when it was lent to the Mostra delle Armi Antiche at Florence in 1938.

[2] Trapp and Mann, *The Armoury of the Castle of Churburg*, 1929, no. 21.

[3] Trapp and Mann, *op. cit.*, no. 20; *Archaeologia*, lxxx, pl. XXVI, 5.

[4] *Arch. Journal*, vol. xlviii, p. 25.

This group occurs four times in the Musée de l'Armée at Paris, viz. on the gigantic cuisses, no. G 2, on the pauldrons and arms, no. G 3, on the helmet of the armour, no. G 8 (a late instance), and the sallet, no. H 29. The Metropolitan Museum, New York, possesses six pieces bearing this triple mark, to wit, on four *armets à rondelle* (one of which came from Chalcis and one from the collection of Baron Léry (fig. 7)), also on a gauntlet, and the left elbow of a composite suit. It occurs on a war hat in the Severance collection in the Cleveland Museum, Ohio;[1] on a sallet of Spanish fashion, a breast-plate, and a chanfron in the collection of M. Pauilhac at Paris; and on a 'Venetian' sallet in the Clements collection in the Kunstgewerbe Museum at Cologne. It is also found as a double (not triple) mark on the bascinet of Henry VIII's tonlet armour in the Tower (II. 7), probably its latest appearance.

The crowned MY, alone and without the subsidiary split cross and M marks, is prominently etched, as well as stamped, on the jousting helm of Gasparo Fracasso at Vienna. A form of the crowned MY under an abbreviation sign instead of a crown occurs, with two other subsidiary marks, on a 'Venetian' sallet in the Tower of London (IV. 7), and the same three marks are on a similar sallet in the collection of Mr. R. L. Scott (fig. 8).

There is more than one form of the stamp of the split cross enclosing an M; sometimes the head of the cross has square ends (figs. 6 and 7) and at other times they are in the form known in heraldry as a cross moline (figs. 4 and 5). Both occur on the armour of Frederick the Victorious at Vienna. The split cross and M, with or without the MY mark, occurs, in all, forty-four times on the armour of Galeazzo de Arco at Churburg (pl. CXXX, 1). It is found by itself, singly or in pairs, on an armet and parts of a fifteenth-century armour formerly in the Estruch collection; on the culet of a backplate and large elbow-guard in the possession of Sir Edward Barry, Bt., at Ockwells Manor; and on an upper arm from Chalcis or Rhodes in the Metropolitan Museum, New York. A variant of it, rather larger and cruder, is stamped on many pieces in the armoury of the duke of Medinaceli, which, until the Civil War, was kept in his palace at Madrid. But these are all of light Spanish fashion and the mark may be a contemporary imitation of that on the Milanese armour made for export.

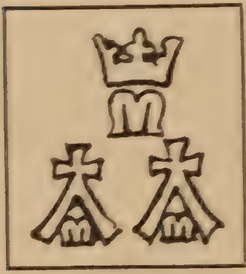
Fig. 9

Very closely resembling the group just described is one in which the two split crosses enclosing M's are surmounted by a crowned M, instead of MY (fig. 9). This occurs three times in the Sanctuary, once on both pauldrons of no. 4 (pl. CXVII, 1–4), on the right pauldron of no. 5 (pl. CXVIII, 1, 2), on the lower breast-plate of the cuirass of no. 3 (pl. CXII, 2), on the skirt of the breast

[1] Helen Ives Gilchrist, *Catalogue of the Severance Collection*, 1924, no. B 2.

made in one piece of no. 5 (pl. CXIV, 2). This group of three is also to be found on an *armet à rondelle* in the possession of Sir Edward Barry.

The same crowned M, but accompanied by two M's incorporating upright crosses, instead of split crosses, appears on a sallet at Churburg, no. 23, and also on a sallet of very similar make with long tail and large-headed rivets in the Estruch and Paulihac collections (fig. 11). But it occurs more frequently in conjunction with the mark of the crossed keys.

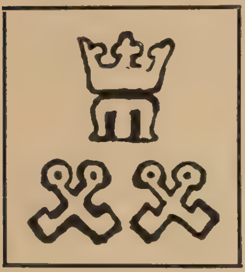
Fig. 10

This group of three marks (fig. 10) is surmounted by the same crowned M as the last, but the two lower marks consist of crossed keys. It occurs on the reinforcing piece with diagonal rib on the left pauldron of no. 2 in the Sanctuary. It is also found on the bevor of a sallet formerly at Churburg (no. 23), which was sold by auction at Zürich in 1936, and is now in the collection of Mr. W. R. Hearst at St. Donat's Castle. Another bevor with the same three marks and with the addition of the letters I H crowned was in the Baron de Cosson's sale at Sotheby's in 1929, lot 133. It is generally believed that the crossed keys of St. Peter (in reverse) are the mark of the Negroli of Milan. This is based firstly on their appearance along with the signature in full of Filippo son of Jacopo Negroli on the casque of Francesco Maria della Rovere at Vienna dated 1532 (fig. 12). Böheim and Gelli treated the names Negroli and Negroni as interchangeable. Negroni was the family name of the Missaglias, one of whom is cited in a lawsuit of 1495 as *il magnifico conte Antonio Negroni da Ello detto Missaglia.*[1] Their arms were a wheel and a Moor's head: whereas the arms

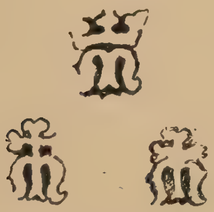
Fig. 11
Pauilhac

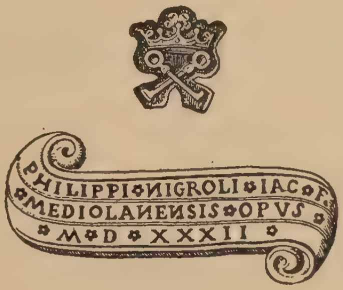

Fig. 12
Vienna

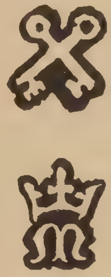
Fig. 13
Churburg

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[1] Motta, *Archivio Storico Lombardo*, 1914, p. 223. Böheim wrongly transcribed as Negroli the name of the Jurisconsult Giacomo dei Negroni da Ello †1518 on his tomb in S. Satiro at Milan. Motta and the Baron de Cosson regarded the Negroni and Negroli as two distinct families. In an unpublished note the baron has stated that he could find no reliable documentary evidence of the Negroli earlier than 1492, though after that date their name occurs frequently. In 1919 L. Beltrami published a letter of 1467 relating to the ordering of a sallet from one *Antonio Nr̄oli del Missaglia*, but the baron was disposed to regard this isolated instance as a clerical error. Nor did he accept as evidence the spelling

of Negroli are variously given as azure, a barrel or, and later (as marquesses) azure, two keys in saltire, one or and one argent, with bits in base and tied by a riband argent: a charge which helps to confirm the ascription of the mark.[1] Another mark attributable to the Negroli is that of the compasses and the terminal letters N-I found on several parts of early-sixteenth-century armour in the Musée de l'Armée nos. G 7, G 10, and G 178: while the sallet of the contemporary etched half-armour no. G 8 bears the triple MY and M mark of fig. 3. M. Pauilhac possesses an armour etched with the compasses and the letters N-S (*NegroluS*).

The mark of crossed keys by themselves, unsurmounted by the crowned M, occurs on the legs of the 'giant' armour of Ulrich VI Matsch at Churburg[2] (fig. 14), twice on each cuisse and once on each greave. Ulrich's name is punched in contemporary lettering on the *lisière d'arrêt* of the cuisses. It also occurs on the gorget of the composite suit no. A 6[3] in the Royal Armoury at Madrid (fig. 15), and on a plain late-fifteenth-century breast-plate in the armoury of the duke of Medinaceli at Madrid (fig. 16).

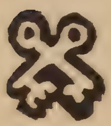
Fig. 14
Churburg 19

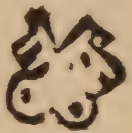
Fig. 15
Madrid A 6

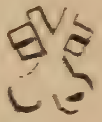
Fig. 16
Medinaceli

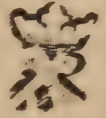
Fig. 17
Madrid D 12

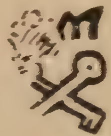
Fig. 18
Tower

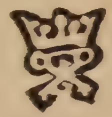
Fig. 19
Hermitage

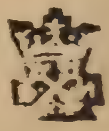
Fig. 20
New York

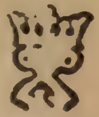
Fig. 21
Cleveland

The crossed-keys mark with the addition of a crown is more frequent and occurs on the burgonet of Francesco Maria della Rovere, duke of Urbino, already referred to (fig. 12); on a sallet with Moorish overlay at Madrid (no. D 12, fig. 17); on a sallet with brass borders from Rhodes in the Tower of London (formerly in the Rotunda at Woolwich (fig. 18));[4] on a tilting-helm in the Hermitage at Leningrad (fig. 19);[5] on a left arm in the Dean collection, New York, where it is flanked by two initials, ? D.N. (fig. 20); and on a breast-plate in the Severance collection in the Cleveland Museum,[6] formerly in that of the Baron de Cosson (fig. 21); and on a small sallet in the collection of Signor Marzoli.

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of the name in a MS. genealogy of the Negroli (*sic*) and Missaglia family, printed by Angelucci, on the grounds that it had been compiled in the late sixteenth century, when the fame of the Negroli as armourers was still fresh in memory and would easily account for the alteration of a consonant. But it should be noted that the armour of Ulrich VI Matsch, who died in 1481, bears the cross-keys mark.

[1] Rietstap, *Armorial General*, 2nd ed., II, p. 302.

[2] Trapp and Mann, *op. cit.*, no. 19.

[3] Conde Valencia de Don Juan, *op. cit.*, 1896.

[4] C. J. ffoulkes, 'Armour from the Rotunda', *Archaeologia*, lxx, p. 67, pl. XIII, 5.

[5] Cat. Lenz, 1908, p. 165; Gille and Rockstuhl, *Le Musée de Tzarskoe Selo*, 1835–53, pl. 112.

[6] Gilchrist, *Catalogue of the Severance Collection*, 1924, no. C 3.

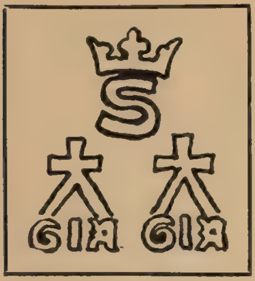

Fig. 22

The next group of three marks consists of the letter S crowned, surmounting two split crosses enclosing the letters GIA (fig. 22). This occurs on the upper cannon of the right arm and on the left elbow of armour no. I (pls. CII, CXIX, I, 2). The same group (fig. 23) is found on a composite armour in the Dean collection in the Metropolitan Museum (Cat. no. 2). The two lower marks also occur by themselves, though indistinctly, on a skull-piece in the Pauilhac collection (fig. 24).

There are two very similar variants of this group. A crowned S surmounting two split crosses enclosing the letters GIS occurs on the backplate of the armour of Roberto di San Severino at Vienna (fig. 25; pl. CXXX, 2), which has already been alluded to in connexion with the 'Missaglia' group. Böheim reproduces a mark GA on the breast, and it is therefore possible that the mark on the back may perhaps be GIA and not GIS. He wrongly surmised that these letters represented the owner's titles—Cajazzo-Severino. It is also stamped on a visorless armet in the Museo Stibbert no. 3880 (fig. 26).

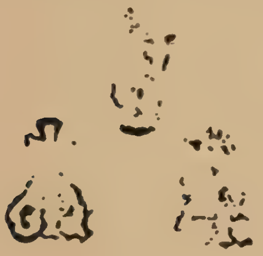

Fig. 23
New York

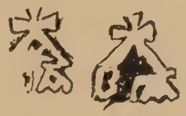

Fig. 24
Pauilhac

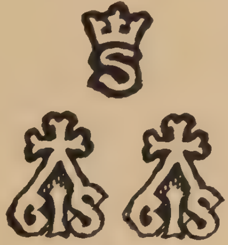

Fig. 25
Vienna

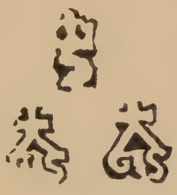

Fig. 26
Stibbert

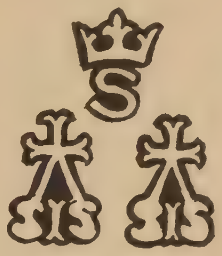

Fig. 26 *b*
de Cosson

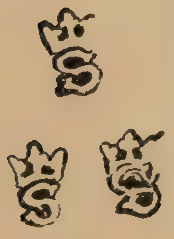

Fig. 27
Pauilhac

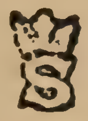

Fig. 28
Pauilhac

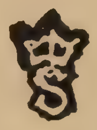

Fig. 29
New York

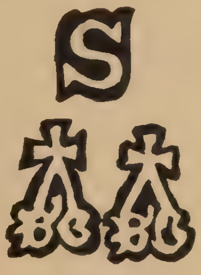

Fig. 30
Churburg

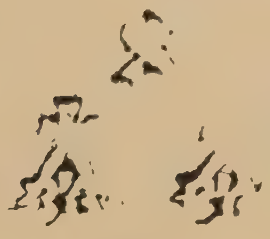

Fig. 31
New York

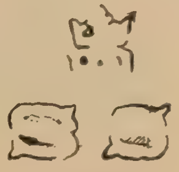

Fig. 32
Madrid

Another variant has the letters SIS in place of GIA or GIS. This occurs on an armet formerly in the Baron de Cosson's collection and now in the possession of the baroness (fig. 26 *b*),[1] and also, curiously enough, is clearly stamped twice on each side of a voulge in the collection of Cavaliere Luigi Marzoli at Palazzolo sull' Oglio. It is very rare to find the same mark stamped on both armour and weapons, as the respective crafts were usually organized in separate guilds.

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[1] Laking, *Record*, ii, fig. 438 *c*.

A group of three crowned S's occurs on the left pectoral plate of a brigandine in the collection of M. Paulhac (formerly belonging to Dr. Bashford Dean) and on a pole-axe in the same collection (figs. 27 and 28). The occurrence a second time of the same mark on both plate armour and a staff weapon must be more than a coincidence, and points to the same workshop in both cases. A single crowned S is stamped on a tall barbute from Chalcis in the Dean collection in the Metropolitan Museum, no. 27 (fig. 29). Somewhat different, but worthy of mention in this connexion, is the monogram of a cross entwined with an S which is stamped on many parts of the Italian armour of *c.* 1430–50 in the Dino collection in the Metropolitan Museum.[1]

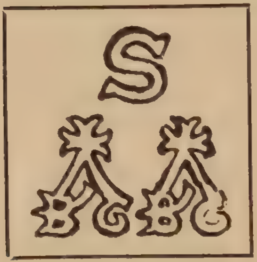

Fig. 33

The letter S also plays a prominent part in another group of three marks in the Sanctuary (fig. 33). In this case it is uncrowned, and surmounts two split crosses whose legs are terminated by the letters BG, the B having a flourish. This group is stamped six times on the breast and back of no. 4 in the Sanctuary (pls. CIII, 2, and CXIII, 2 and 4); once on the upper breast, twice on the upper backplate, once on the lower breast or placate, once on the bottom lame of the skirt in front, and once on the bottom lame of the skirt or culet of the back.

It also occurs on the shoulders of the early 'Bear' armour at Churburg[2] (fig. 30) and, so far as one can tell in its present half-obliterated state, on the sallet of the Gothic armour formerly in the Spitzer and Dino collections, no. A 2 (fig. 31). A single uncrowned S is found on an elbow of the fifteenth century in the Dean collection in the Metropolitan Museum. A group of three marks consisting of a crowned M? (cf. p. 334, *supra*) surmounting two S's occurs on a sallet at Madrid (fig. 32).[3]

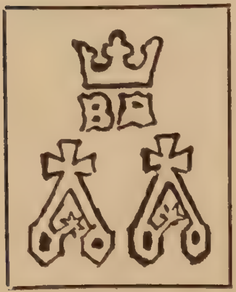

Fig. 34

The next group (fig. 34), consists of the letters BA crowned surmounting two split crosses, the legs of which terminate in two letters O, the first one having an extension in the form of a spur. It is stamped four times on the breast and back of armour no. 2 in the Sanctuary (pls. CIII, CXII, 1, 3).

These three marks are also found on a greave in M. Paulhac's collection (fig. 35). The crowned BA alone occurs on a 'Venetian' sallet which was in the

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[1] Baron de Cosson, *Le Cabinet d'Armes de . . . Talleyrand-Périgord, Duc de Dino,* no. A 1; *Archaeologia,* lxxx, pl. XXVI, 2.

[2] Trapp and Mann, *op. cit.*, no. 18.

[3] Catálogo Valencia, 1898, no. D 8.

Zouche collection at Parham (fig. 36).[1] The letters BA uncrowned but surmounted by a mark of elision, like the MY previously mentioned, are found on another 'Venetian' sallet in the Poldi Pezzoli Museum at Milan. We have read the top mark as BA, but if it should be interpreted as BE, these letters crowned occur as the surmounting mark on the cuirass of Petermann Feer's armour at Lucerne,[2] and on the upper part of a Gothic breast-plate in the collection of M. Pauilhac, and are referred to below (fig. 65). A crowned BE or BB occurs on the pauldrons of the Churburg armour no. 20, now in the collection of Mr. R. L. Scott (fig. 63).

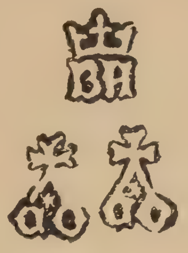
Fig. 35
Pauilhac

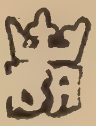
Fig. 36
Zouche

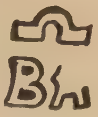
Fig. 37
Milan

The split cross and spurred O also occur as the subsidiary ones of another group of three marks on the back of the armet of no. 2 in the Sanctuary. It is surmounted by the letters YO crowned (fig. 38). In this case the letters of the top mark are not clear, but that they were originally YO is indicated by the existence of a similar mark in better preservation on an armet in the Wallace collection (fig. 39).[3] This mark also occurs on the right side of the breast-plate of the armour of Duarte de Almeida, the heroic Portuguese standard-bearer at the battle of the Toro in 1476, whose armour was (and we trust still is) preserved in the Capilla de Los Reyos Nuevos in Toledo Cathedral (fig. 40); and on an armet with wrapper in the collection of M. Pauilhac (fig. 41).[4] Two split crosses en-

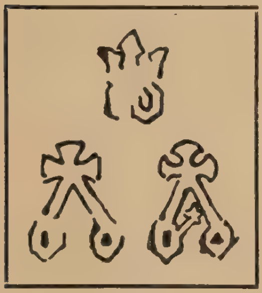
Fig. 38

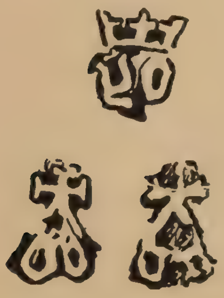
Fig. 39
Wallace

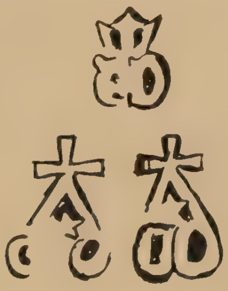
Fig. 40
Toledo

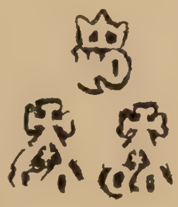
Fig. 41
Pauilhac

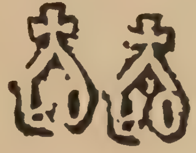
Fig. 42
New York

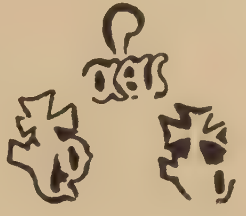
Fig. 43
Pauilhac

closing the letters YO are stamped on the elbow of a composite Gothic armour in the Dean collection in the Metropolitan Museum (fig. 42).[1] They are also stamped surmounted by what appear to be the letters CES (?) on an Italian mitten gauntlet in M. Paulhac's collection (fig. 43).

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[1] Sold, Sotheby's, 10th–11th November 1920, lot 71.

[2] Cat. by E. A. Gessler and J. Meyer-Schneider, N.D., no. 1.

[3] S. J. Camp, *Catalogue of Arms and Armour*, 2nd edition, 1924, part 1, no. 85.

[4] *Archaeologia*, lxxx, 298, fig. 4.

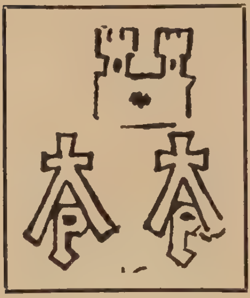
Fig. 44

The next group of marks (fig. 44) takes the form of a castle with two battlemented towers, and below are two split crosses enclosing the letter P. It is clearly stamped on the right side of the back of the skull of the armet of no. 5 (pls. CVIII, 5, CIX, 4, 7).

These marks occur, once each, on an armet of very similar form in the Carrand collection in the Museo Nazionale in the Bargello at Florence (fig. 45).[2] They are also found on a sallet in the Tower of London (no. IV, 18; fig. 46); on another sallet in the Zeughaus at Berlin; and on a third in the Metropolitan Museum, New York (fig. 48). The castle alone is stamped on a sallet in the Museo Correr at Venice (formerly in the Arsenal there), and on an articulated breast-plate of the fifteenth century at Solothurn (fig. 49).[3] It may also be identified on an armet in the Dean collection in the Metropolitan Museum.

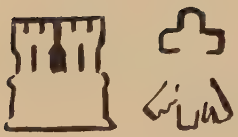
Fig. 45
Bargello

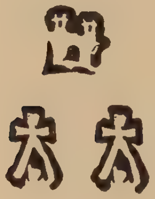
Fig. 46
Tower

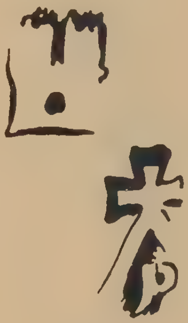
Fig. 47
Berlin

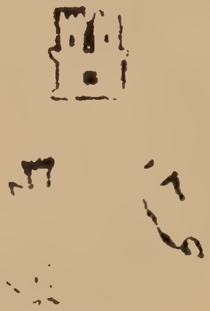
Fig. 48
New York

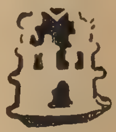
Fig. 49
Solothurn

The late Baron de Cosson at one time suggested that this might be the mark of the city of Forli, the arms of which are a castle. But it would do equally well for the castle of Milan, which is represented in the marks of the Milanese swordsmiths Antonio and Federico Piccinino in the next century. But for the P one would be tempted to regard it as the mark of the armourer Giovanni da Castello, who is recorded as having been working in Milan between 1456 and 1468.[4]

---

[1] Kienbusch and Grancsay, no. 5; cf. also crowned YA, *ibid.*, no. 2.

[2] Illustrated on pl. XIX of the catalogue of the Mostra delle Armi Antiche at Florence, 1938. In this case the castle is on one side of the skull, and the split cross and P on the other.

[3] Cat. R. Wegeli, *Zeughaus zu Solothurn*, 1911, no. 1.

[4] E. Motta, 'Armaiuoli Milanesi nel periodo Visconteo-Sforzesco', in *Archivio Storico Lombardo*, 1914, pp. 67, 94; J. G. Mann, *Archaeologia*, lxxx, p. 141.

The mark of a split cross enclosing a P, stamped alone, occurs on a 'Venetian' sallet in the Wallace collection, no. 39 (fig. 50). Further evidence is provided by a triple mark, formed of the name PAULO ensigned with a coronet, surmounting two split crosses enclosing the letter P (fig. 51), which occurs on a pauldron and vambrace in the collection of M. Pauilhac. In Motta's list of armourers working in Milan in the fifteenth century, there is, as it happens, only one Paolo, namely Paolo Capelli, who is recorded as working in 1419. This is too early for our armet, but his career may have been a long one, or the mark may have been continued by Cristoforo Capelli, who was working in 1480.

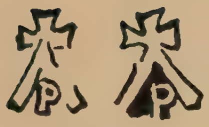
Fig. 50
Wallace

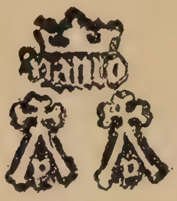

Fig. 51
Pauilhac

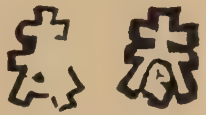
Fig. 52
Churburg

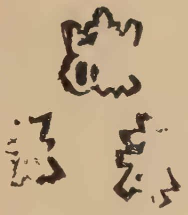
Fig. 53
Pauilhac

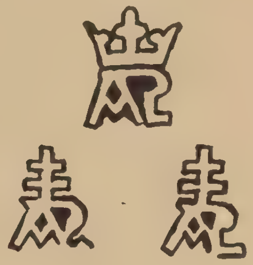
Fig. 54
Marzoli

This group (fig. 55) is stamped in pairs twice on the top lames of the left and right cuisses of no. 1 (pls. cxi, 4, cxxii, 3). The lower mark of the double-crossed A is stamped twice on the neck-plate of a bevor at Churburg, no. 56 (fig. 52). It is also found beneath a crowned mark, which is not very distinct, on a backplate in the collection of M. Pauilhac (fig. 53). It also occurs on the gorget plate of the bevor of the composite armour from the Spitzer and Dino collections[1] now in the Metropolitan Museum. Compare also the lower marks of the three on the 'Venetian' sallet from the Leiden collection now belonging to Signor Marzoli (fig. 54).

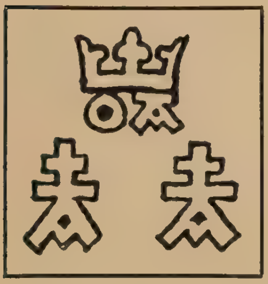
Fig. 55

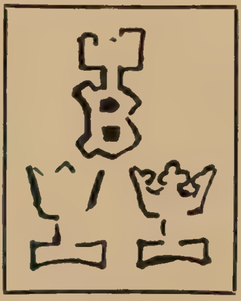
Fig. 56

This mark (fig. 56) is stamped on the upper cannon of the right arm of no. 2. I have not so far been able to trace its existence elsewhere. The letter B uncrowned occurs on the plates of several brigandines in the Metropolitan Museum.

There are three more instances of triple groups of marks on the armour in the Sanctuary, but unfortunately not very distinct. It is to be hoped that their publication here will bring to light the existence elsewhere of similar marks in a more complete form, which will enable one to deduce their original appearance. They occur respectively on the tassets of no. 2 (fig. 57) and the cuisses of no. 5 (figs. 58, 59) (pl. cxxiii, 1, 3).

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[1] Baron de Cosson, *Le Cabinet d'Armes . . du Duc de Dino*, 1901, no. A 2; Laking, *Record*, i, fig. 240.

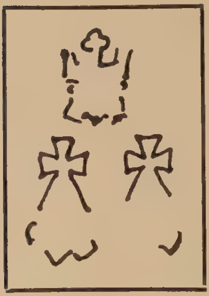


Fig. 57

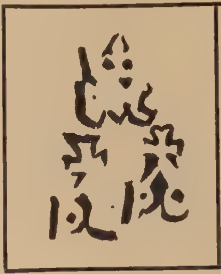


Fig. 58

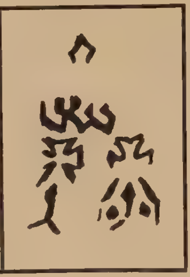


Fig. 59

There are three instances in the Sanctuary of two marks together without a surmounting mark. Fig. 60 appears on the top lames of the cuisses of no. 2. It consists of a split cross terminating in the letter B and another letter which is unfortunately indistinct. There are in existence a number of instances of a split cross with the legs terminating in BE or BƎ (reversed), and surmounted by a crowned BE. Fig. 61 occurs on a left greave in the Dean collection,[1] and on a sallet and on the backplate from the battle of Morat, 1476, in the Landesmuseum at Zürich.[2] The top mark occurs by itself (fig. 63) on the finely built pauldrons of the 'Avant' suit formerly at Churburg (no. 20) and now in Mr. R. L. Scott's collection, and on a sallet belonging to Signor Marzoli.

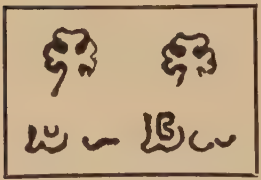


Fig. 60

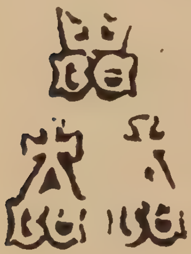


Fig. 61
New York

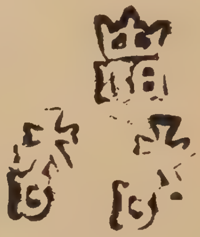


Fig. 62
Zürich

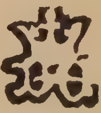


Fig. 63
Churburg 20

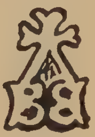


Fig. 64
Vienna

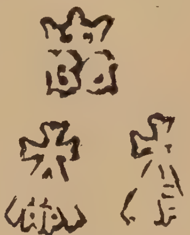


Fig. 65
Pauilhac

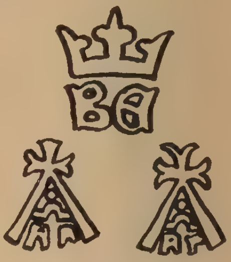


Fig. 66
Lucerne

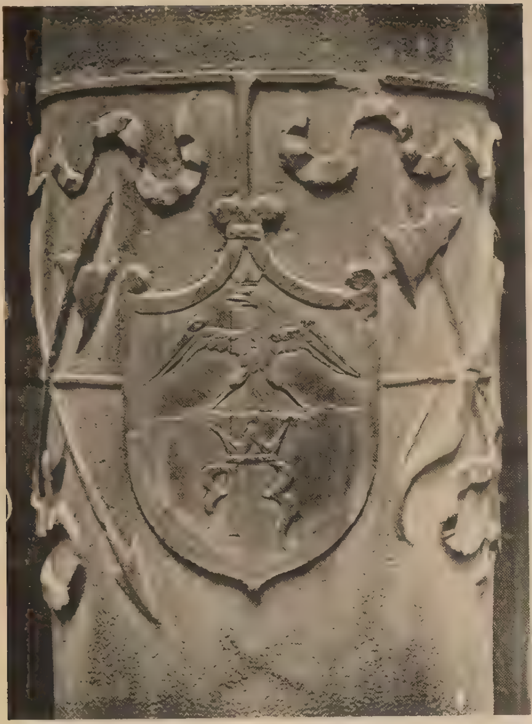
Compare also the mark (fig. 64) which is stamped on the cuisses of the armour of Roberto di San Severino at Vienna. The crowned BE occurs in combination with two split crosses whose legs enclose the letters AP on an upper breast-plate in the Pauilhac collection (fig. 65, ex Buttin) and on the breast and back of Petermann Feer's armour in the Rathaus at Lucerne (fig. 66).[3]

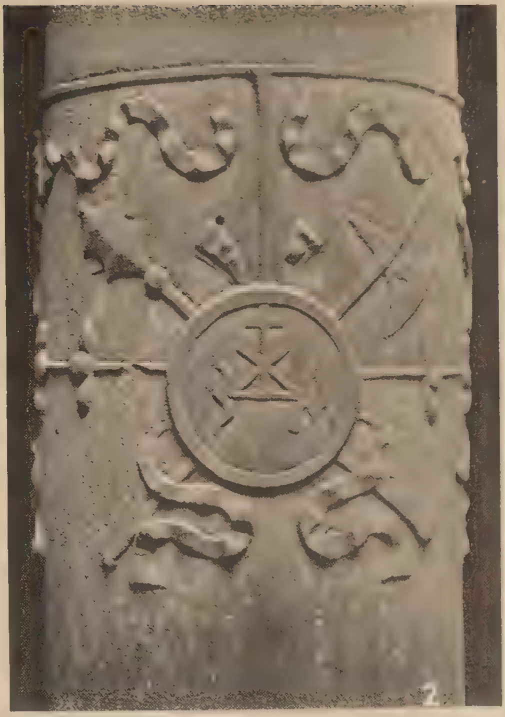
The second double mark (fig. 67) also consists of two split crosses, but the letters at the bottom are indecipherable. It is stamped on the reinforcing plate

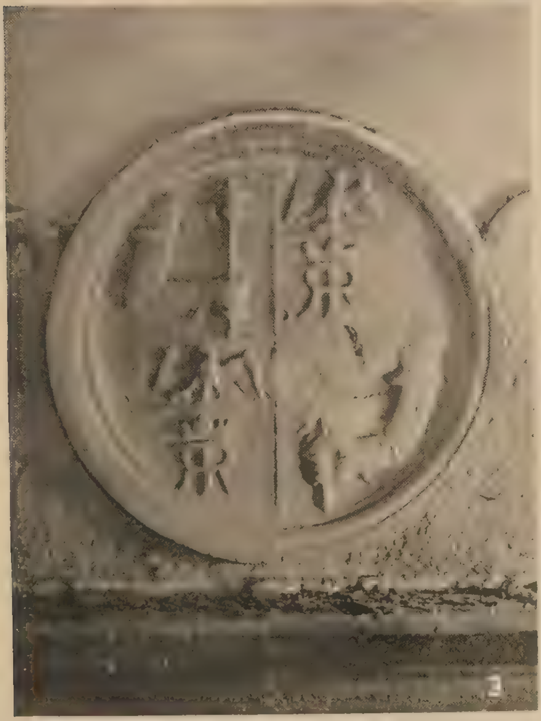
[1] Cat. Kienbusch and Grancsay, no. 3.

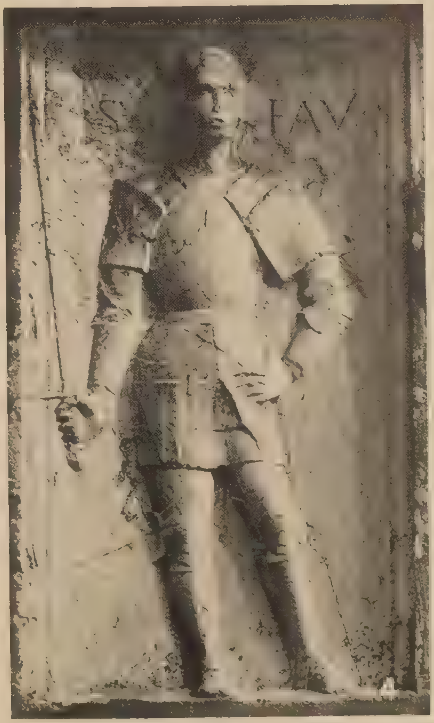
[2] *Archaeologia*, lxxx, pl. xxix, 4.

[3] Gessler and Meyer-Schneider, no. 1.









1, 2, and 3. Details of the carvings upon the pillars in the courtyard of the Casa Mazzolini Cassotti at Bergamo, sixteenth century. 4. Marble relief of San Faustino, one of the two legendary saviours of the city of Brescia in 1438, erected in the fifteenth century

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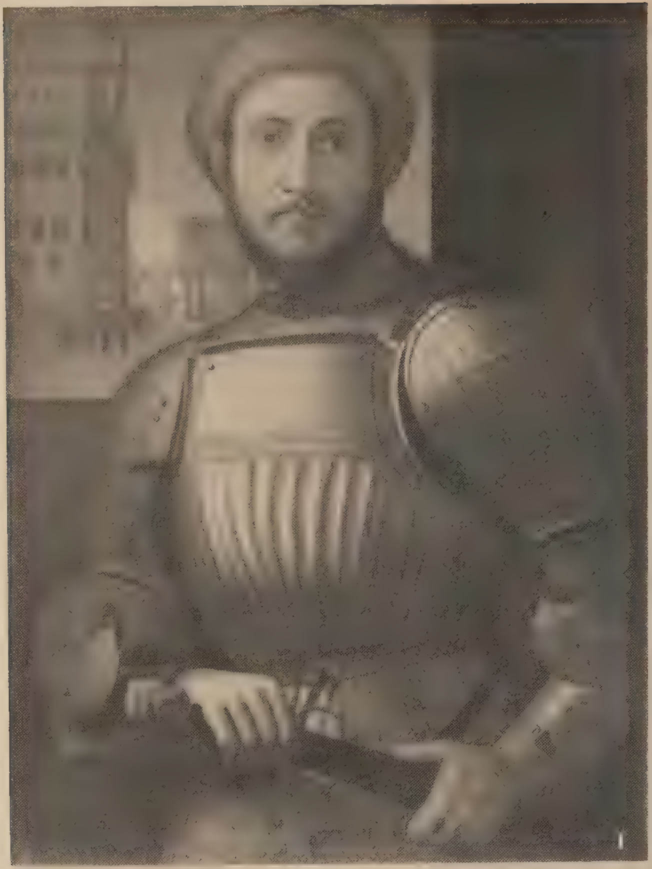
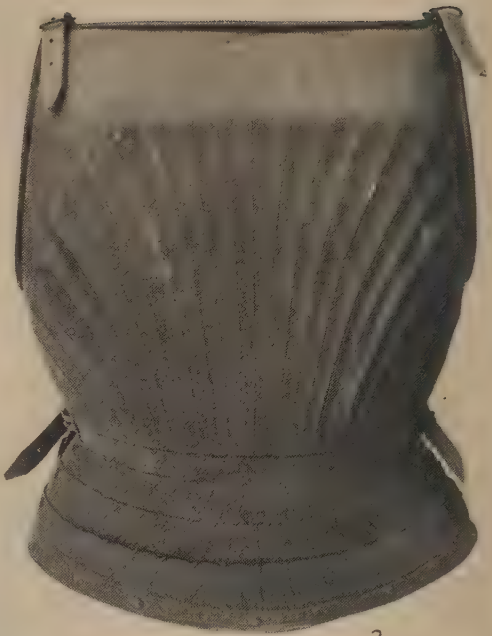
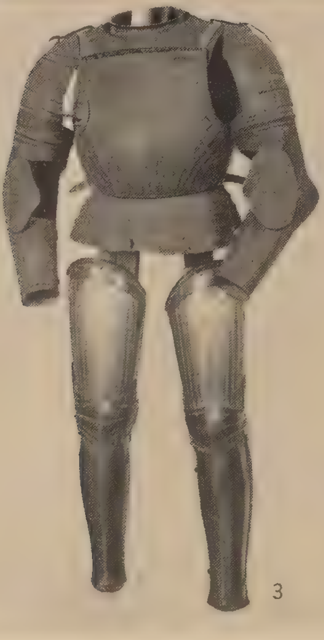
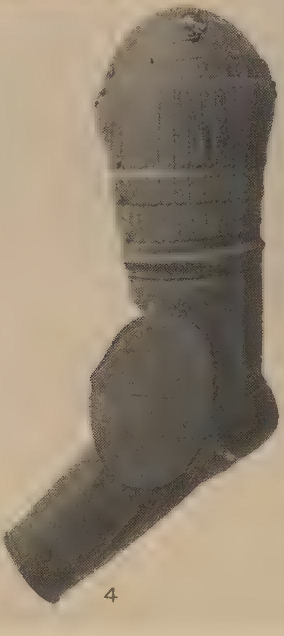




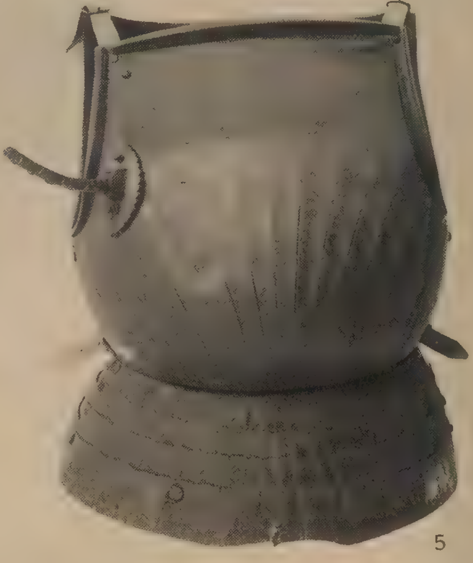
2



3



4



5

1. Portrait of a warrior by Piero di Cosimo, *c.* 1515. London, National Gallery 2. Backplate of no. 7 in the Sanctuary
3. Armour no. 7 4. Left arm of no. 7 5. Cuirass of no. 7

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of the right pauldron of no. 3 (pl. CXVI, 1, 4). Another mark (fig. 68) occurs on the reinforcing wing covering the left elbow of suit no. 3. A single mark, apparently of another form, is stamped on the upper cannon (fig. 69).

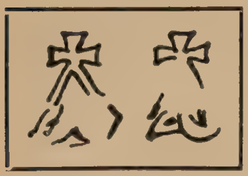
Fig. 67

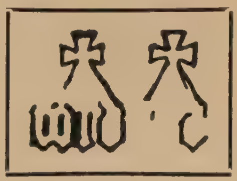
Fig. 68

A somewhat similar split-cross mark is stamped on the right side at the back of the armet of no. 6 (fig. 70). The mark given in fig. 71, also indistinct, appears to consist of a cross above the letters MR or MA, and is stamped on the reinforce of the right pauldron of no. 6 (pl. CXVIII, 5, 6).

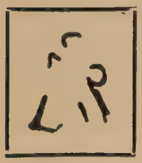
Fig. 69

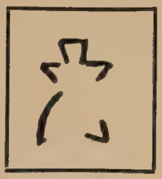
Fig. 70

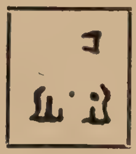
Fig. 71

There are no marks on the armours of later date which are described in the following pages. Though the Italian armourers appear to have preceded the Germans in marking plate armour (this was not the case with swords, which were marked from a very early date at Passau and elsewhere), they seem to have largely abandoned the practice in the sixteenth century. After the era of the Negroli and Bartolommeo Campi, a great deal of Italian armour of the middle and second half of the sixteenth century bears no mark at all. Pompeo della Chiesa was the only one of the makers of so-called 'Pisan' armour in the latter half of the century to sign his name.

A Description of the Later Armours in the Sanctuary

7. The fluted armour illustrated on pl. CXXV combines the upper part of the sixteenth figure and the legs of the fifth figure in the Sanctuary.[1] It consists of a gorget with circular flanged collar, intended to engage with a close-helmet, with three narrow lames at the neck, and two main plates, fluted, front and back. These elements have yet to be re-strapped. The breast and back are cut nearly straight across the top with plain flanged borders, and the armholes are fitted with gussets working on sliding rivets. The fluting is regular, leaving a plain frieze along the upper part of both breast and back, and there are a waist-plate with a skirt of four lames in front, and a culet of three behind. Rivets remain to show where the straps for tassets were affixed to the lowest lame in front. The arms consist of fluted munnions or rerebraces of five lames, attached to vambraces consisting of upper cannon with turning joint, couter articulated twice above and below and with a fluted side wing, and lower cannon. The couter is embossed with a cross formed of four lozenge-shaped arms.

The leg harness consists of cuisses built in one piece, and fluted in vertical ribs except for a band near the upper border, which is lightly etched with a band of running foliage. The border is turned over to a strong angular flange. The poleyns are embossed with vertical and horizontal ridges forming a cross, and the two articulating lames above and below are fluted to correspond and the edges invecked. The greaves are, as usual, not fluted, and are cut off straight round the ankle. Their backs are missing. There is no fluted helmet in the Sanctuary which would correspond with this suit. An armour of very similar make can be seen in the portrait of an unknown warrior by Piero di Cosimo in the National Gallery (pl. cxxv, 1). As noted in a previous reference to this picture,[1] the presence of Michelangelo's David in the background shows that it was painted subsequently to 1504, the year in which the statue was erected outside the Palazzo Vecchio, while the artist's death in 1520 places a limit at the other end to the date of its production. This type of fluted armour is usually associated with Germany, and found comparatively little favour in Italy, though it often appears in the paintings of Dosso Dossi. The inventory of the armoury of the Gonzagas in the Palace at Mantua compiled in 1542 mentions a suit of armour as '*fatta a cannelini alla thodesca*', and Milanese armourers are known sometimes to have worked in the German style.[2] Apart from other details the build of the legs strongly indicates an Italian origin for this suit.

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[1] *Archaeologia*, LXXX, pls. XXI, 1; XXII, 2.

8. This cuirass of the early sixteenth century (pl. cxiv, 3, 4) is one of fine quality and was formerly on the twenty-seventh dummy when it was associated with the arms now mounted on no. 6 *supra*. The curved borders of the neck and armholes have plain turnovers, bent boldly outwards. A small pair of twin holes in the centre near the neck, on both front and back, are characteristic of many breasts of this time, and were used for securing the lining. The surface is ornamented by a spray of sunk flutes or gadroons, and their form, broadening to rounded ends, is accentuated by an engraved outline. Gadrooned flutes are rare, and one is reminded of those on one of the etched Italian armours in the Musée de l'Armée (no. G 9), though in that case the gadroons are embossed and not sunk. On the right side is bolted a hinged lance-rest with curved and engraved arm. There is a skirt of five lames, the top lame engraved in continuation of the flutes of the breast and encircled with an engraved cord. The edges of the four lower lames are bevelled and cut in the centre in a double ogee pattern, each one larger than the last in descending order, and there is a cusp at each side above the rivet. Two pairs of rivets on the second lame from the bottom formerly carried the tassets. The holes on the edge of the lowest lame held the lining rivets.

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[1] *Archaeologia*, lxxvii, 229.

[2] *Ibid.*, lxxx, 87. In 1480 two Milanese armourers were permitted by the duke to make armour in the German style '*more theutonico fabricata*' (Motta).

The backplate has a spray of eight sunk gadroons like the breast, four on each side of the spinal hollow. On the upper part across the shoulder-blades are traces of an engraved composition in the bold style of the Renaissance including a ship in sail. Further cleaning should reveal the full composition, which may be the Ship of Fortune. The bottom edge has a feathered line of engraving, and the waist-plate carries an engraved cord and flutes like the breast. Only one lame of the culet survives, and this is embossed with a spread of seven flutes.

9. Next in importance is the half-armour (pl. CXXVI, 2) which formerly clothed the thirty-third figure in the Sanctuary. It belongs to a rare group of Milanese breasts of the early years of the sixteenth century, of very globose form with etched friezes across the top and other etched ornament similar to that found upon the blades of the civilian swords of the time known as *cinquedea*. Two examples are at Churburg, nos. 69 and 70 (pl. CXXVI, 1), and to those which I have described elsewhere[1] can be added two which I have since seen in the collection of Prince Odescalchi at Rome. A careful examination after dismounting revealed that no. 9 also possessed an etched frieze across the upper part of the breast, in the central panel of which are the Virgin and Child, with panels of St. Sebastian and St. Barbara[2] on either side. Three bands of etched ornament run from the frieze and armholes to the waist. The straight upper border of the neck and the movable gussets at the armholes have pronounced turnovers. This breast retains its skirt of lames and long tassets of twelve lames each, similar to those on the similar armour at Churburg (no. 69), to which in many respects it bears a strong resemblance. The upper borders of all these lames are ornamented with etched bands of running foliage with a hatched background in the Italian style. With careful cleaning the free and delicate ornament should become more apparent. The tassets were originally attached by straps and buckles, but like so much armour in the Sanctuary the plates have later been crudely fixed together by rivets. There is a backplate of lighter quality built in three parts, a feature of certain Italian and Tyrolese backplates of this time.[3] A pair of arms of contemporary date, but made for another suit, are associated with it. They consist of munnions or rerebraces of

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[1] *Archaeologia*, lxxix, 223-8. Pl. LXXI, 2, reproduces a breast and tassets at Dresden very similar to no. 9 in the Sanctuary.

[2] These two saints, together with the B.V.M., occur on similar breasts at Churburg (no. 70), Solothurn (no. 2), and the diamanté armour in the Bargello (Laking, iv, fig. 1214). St. Sebastian, in company with other saints, occurs on those at Churburg (no. 69), Solothurn (no. 3), Bologna, Tower of London, Sion (Supersaxo armour), and Dean collection, New York. St. Barbara, in company with other saints, occurs on those in the Museo Stibbert (no. 3146), and Musée de l'Armée (no. 98). I have to thank Don Erminio Carra of the Sanctuary for identifying the panel of St. Barbara on no. 9.

[3] Cf. nos. 10 and 11, *infra*. There are many backplates of this kind in the armoury of the duke of Medinaceli.

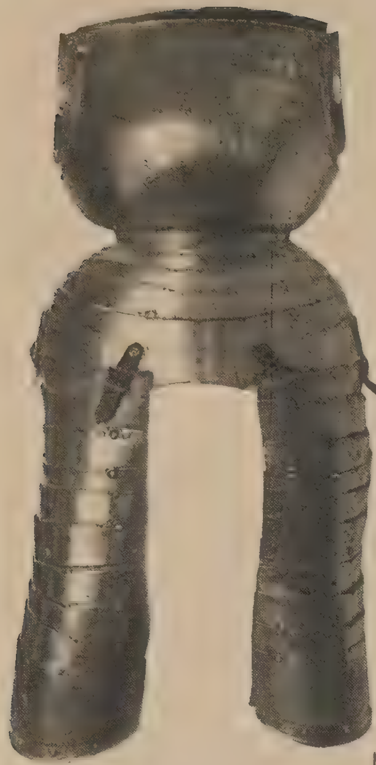
five overlapping lames with their lower edges broadly engrailed or cusped, 'bracelet' couters relieved with fluted lines and pierced with washers for the attachment of points, and tubular vambraces of two parts hinged together, the front one slightly fluted.

No. 10 (pl. CXXVII, 1, 2) formerly clothed the twenty-third dummy. It comprises a gorget with circular flanged collar, articulated three times at the neck, and with the main plates spreading well over the shoulders, where two holes show the position of the sprocket-pins to which the munnions were attached. The breast-plate is made in two parts in the Gothic manner, the lower consisting of a pointed placate riveted to the upper part in the centre, and with a suggestion of a medial ridge. To its lower edge is attached a skirt of three lames, the bottom one being pierced with pairs of holes for attaching a lining. The borders at the neck and armholes are turned over and outwards. The backplate is built of three plates, a back and two sides, like that of the last.[1] Two V-shaped flutes give a suggestion of pleating, another feature of the early part of the century which is found on the little Marignano suit in the Doge's palace at Venice. The arms which are now associated with this suit are probably, like the gorget, a few years later in date. They consist of munnions of six lames of varying breadth attached to the upper part of the turning joint of the vambraces, which comprise upper and lower cannons articulated twice above and twice below to an elbow-cop which has a broad side wing divided into two halves by a horizontal ridge reaching to the point of the elbow.

No. 11 (pl. CXXVII, 3, CXXVIII, 4) carries the seventh armet already described (pl. CVIII, 4).[2] It consists of a breast-plate with boxed turnovers at neck and armholes, and with a V-shaped flute or pleat breaking the plain surface of the front. To its lower edge are attached a skirt of three lames and tassets of four rough lames, at present still crudely riveted to the latter, but originally supported by leathers. The backplate, like that of nos. 9 and 10, is built of three plates, a back and two sides, in this case joined together by two pairs of hinges instead of being riveted. The broad, angular turnover at the neck matches that on the breast, and the V-shaped double flute also corresponds. It differs slightly from no. 10, in that the two stripes are placed wider apart with a spinal hollow between. The arms, which were formerly placed on the thirty-ninth figure back to front, consist of munnions or rerebraces of five lames, the second from the top in each case being larger and having its upper portion standing stiffly upwards to guard the neck, and with its top edge broadly roped. The bottom lame is riveted to the upper collar of the turning joint of the vambraces, which consist of upper and lower cannons, elbow-cops articulated twice above and

[1] Cf. *Archaeologia*, lxxix, pl. LXXVI, 1, painting by Sodoma, and Churburg, no. 71, *ibid.*, pl. LXXVI, 3.

[2] P. 322, *supra*.



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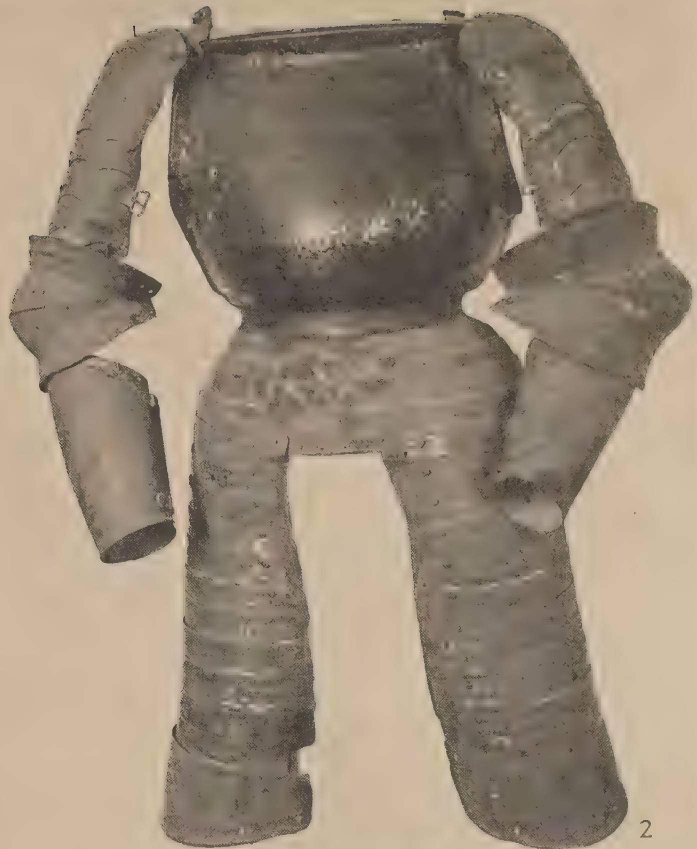

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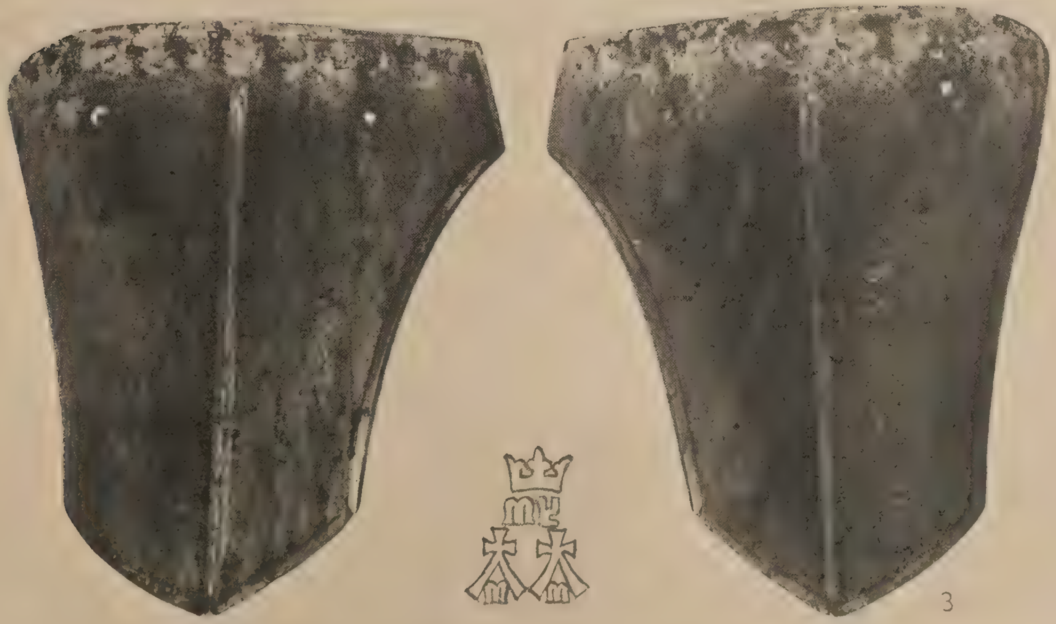

3

1. Armour with etched frieze of saints, *c.* 1510. Churburg, no. 70 2. Armour with etched frieze of saints, *c.* 1510, no. 9 in the Sanctuary 3. Tassets of no. 3, fifteenth century

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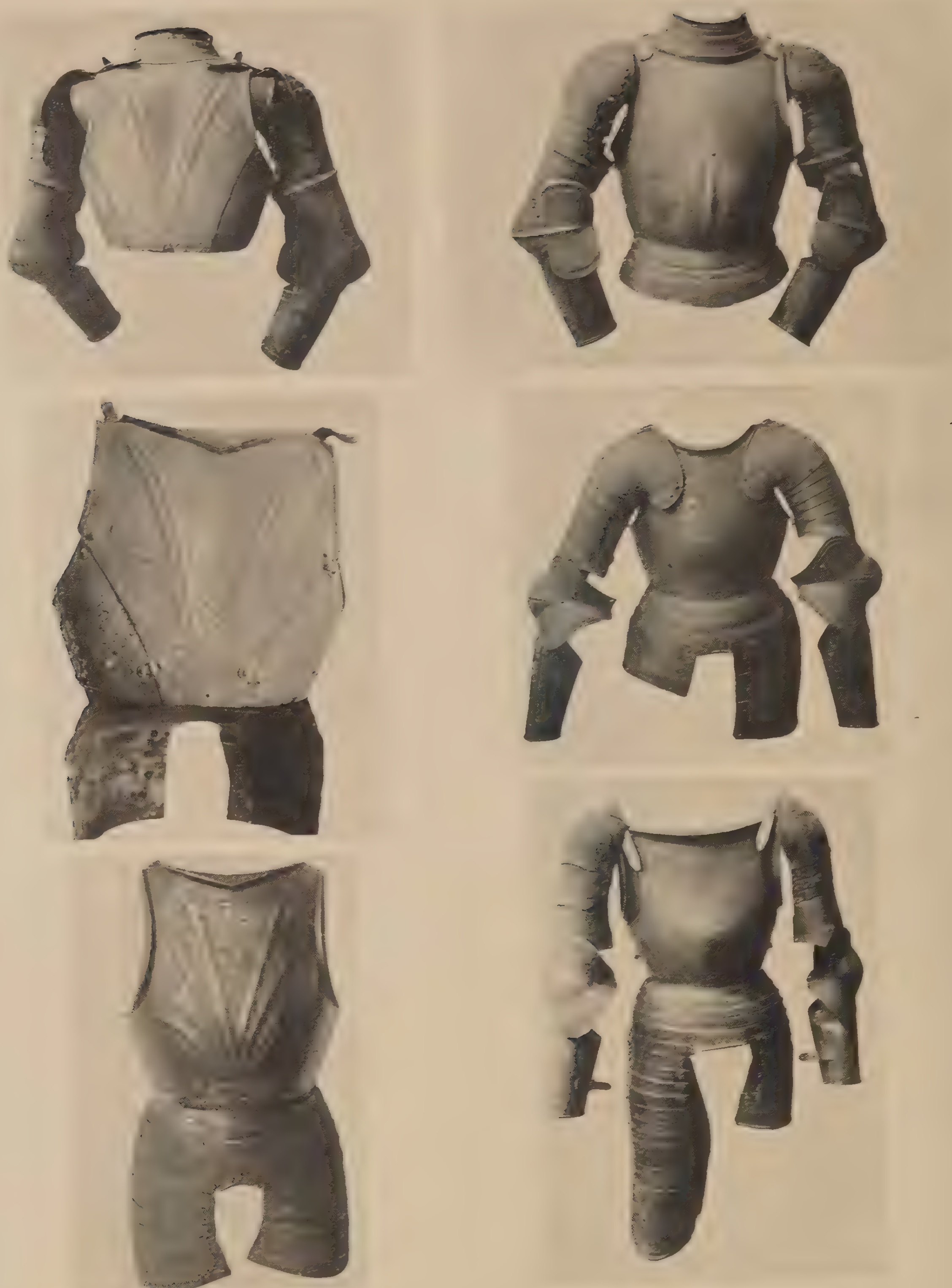

1 and 2. Back and front views of no. 10 3. Back of no. 11 4. Front view of no. 14
5. Breast and tassets of no. 12 6. Armour no. 13 in the Sanctuary. All of the first quarter of the sixteenth century

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below, and with heart-shaped wings, divided horizontally with a roped band, and sunk borders also broadly roped on a long twist.

12. This comprises a breast-plate (pl. cxxvii, 5) similar to the last but with its front fluted in a spray of eight ridges, four on each side of the centre. The borders are turned over to an angular section like the last, that on the neck being especially broad, like that on the breast in the Wallace collection, no. 32.[1] At the waist is riveted a skirt of three lames, the lowest being arched in the centre and pierced with a hole which may have carried a brayette. The crude tassets of five lames each are at present roughly riveted together, as they were found, but originally would have been leathered on the inside.

This breast had a large dent on the right side, and was worn by the thirty-first figure. The inscription beneath the niche told that its owner had been struck by a cannon-ball, but his life had been saved by the intercession of the Madonna delle Grazie.[2] When these figures were dismounted, this dent was without difficulty beaten out from the back by the smith. There is no backplate. The arms mounted with this breast and back date from the middle years of the century (pl. cxxix, 4).[3] The upper cannon has a turning joint with the flange on the inside, and the upper part has two articulated lames on the outside to facilitate the movement of the shoulder. The elbow, which is articulated twice above and twice below, has a heart-shaped wing, the horizontal ridge running right across to the point of the elbow in the Italian manner. The bright borders of the lames visible in the photograph show where stripes of yellow paint protected the surface of the metal more effectively than the black on the remainder.

13. The next suit (pl. cxxvii, 6) has a plain globose breast of *c.* 1520 with the borders of the neck and gussets at the armholes strongly flanged. It is joined to the backplate at the side by turning pins with triangular heads which pass through slots in the breast. There is a skirt of five lames and two unequal tassets. The right one consists of thirteen lames and the left of only six. This discrepancy is explained by the fact that it formerly clothed the eighteenth figure in the Sanctuary, which represented a warrior with a wooden stump in place of his left leg.[4] The arms, which are those previously associated with it, consist of

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[1] *Archaeologia*, lxxix, pl. xxiii, 3.

[2] '*Il fulmine scorreva a me vicino*
Ma tratto fui da morte e da periglio
Perchè Maria lui fe' torcer cammino.'

[3] The arms formerly associated with this were the much later 'Pisan' pair described below on pp. 350–1.

[4] The inscription beneath it read:

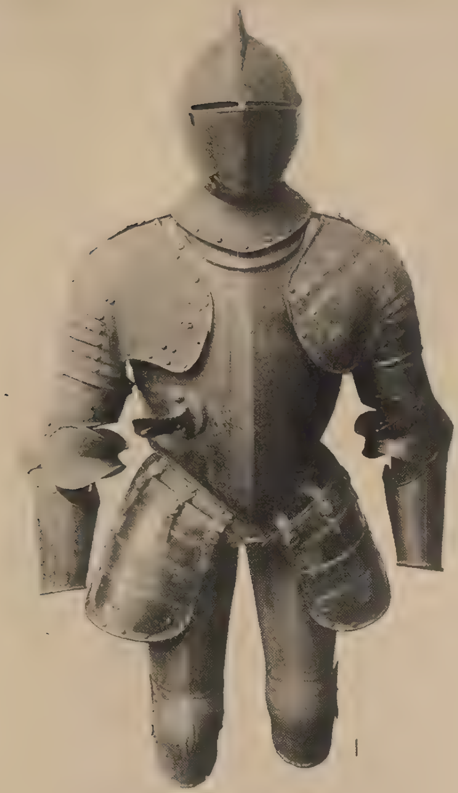
'*Nella guerra cindel mi fu troncato*
L'un de' membri che al corpo era sostegno
Quando Maria chiamai fui risanato.'

munnions or splints of seven (four narrow and three broad) lames from shoulder to elbow, large, round, shell-like couters, and vambraces in two parts joined in the early manner by strap and buckle.

14. This half-armour (pl. CXXVII, 4) was formerly on the twenty-ninth figure, and is formed of a plain globose breast like the last, but differing in that it is not furnished with movable gussets at the armholes. There is a hole in the lower part of the right side, too low for a lance-rest and possibly made by a bullet at short range. There is a skirt of three plates to which are attached three lames of the right tasset (two lower lames are missing) and a left tasset made up of five lames. The top lame, however, is not the one originally made for this position, for in that case it would have had a pointed corner to fit the arch of the fork as can be seen on its companion. This lame has probably been borrowed from the other tasset. The bottom lame is, as usually the case, much deeper. The back-plate is missing. The arms (pl. CXXIX, 5), which are those previously associated with it, consist of small pauldrons, the three upper lames coming forward over the armpits, and rerebraces riveted together and composed of eight lames in all, the upper and lower borders sunk; shell-like couters with sunk bands and pronounced roping; and lower cannon of the vambrace hinged top and bottom, which also has sunk borders but is not roped.

15. This half-suit (pl. CXXVIII, 3) is composed of breast-plate, full arms and tassets, all of the middle years of the sixteenth century, but lacks a helmet and backplate. The breast is long in the waist and articulated once in the lower part. The centre ridge forks at the neck. There is a large hole on the right side of the neck, the border of which is roped. To the single lame of the skirt, a modern one has temporarily been added to carry the tassets on three buckled straps each. The original lame would have been arched over the fork. The tassets are formed of six lames each, with sunk and roped borders. They were removed from the skirt of the fifteenth-century cuirass (now a part of no. 2) on the fifth dummy. The arms consist of large pauldrons, coming well over the armpits at front and back and built of three large and three smaller lames, the lowest of which engages with the upper half of the turning joint. The vambraces consist of upper cannon with turning joint, narrow 'bracelet' couters with roped central horizontal rib, and lower cannons of the usual form. The borders and the ridge of the couters are all lightly roped with a file, and the edges of the lames of the pauldrons emphasized by a double engraved line. The rivet heads are capped with brass.

16. The parts of this homogeneous suit (pl. CXXVIII, 1) were collected from three different figures, but once the coating of paint and dirt had been removed, they were easily identified by their blued surface and gilt borders. It dates about 1570–80. The close-helmet has a high central comb. At the back is a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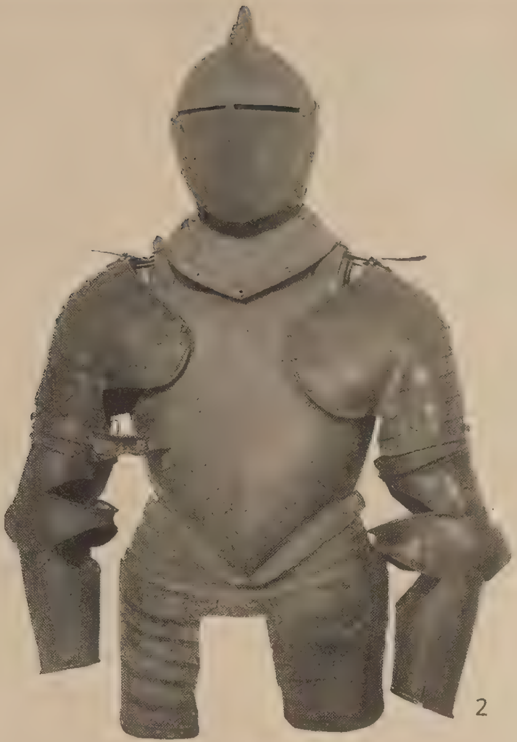
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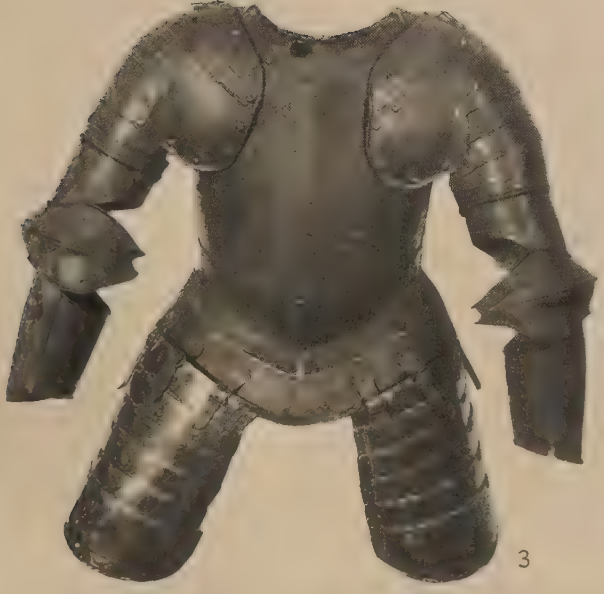
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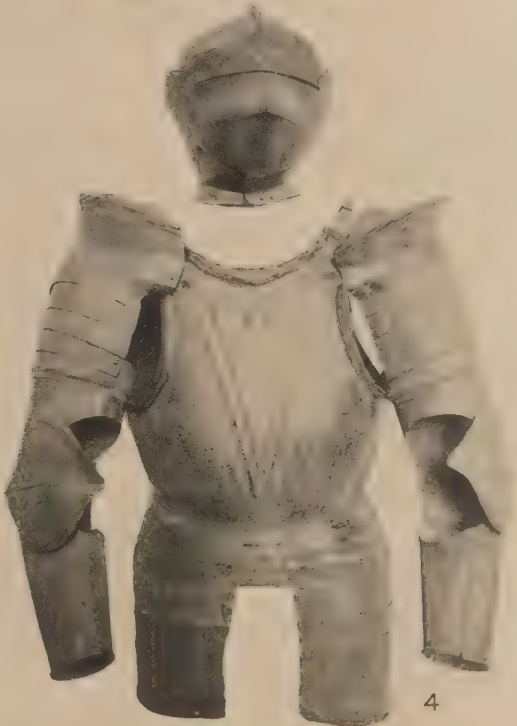
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1. Armour no. 16, *c.* 1560-80, in the Sanctuary 2. Armour no. 17, of the same date 3. Armour no. 15, *c.* 1550
4. Armour no. 11, early sixteenth century

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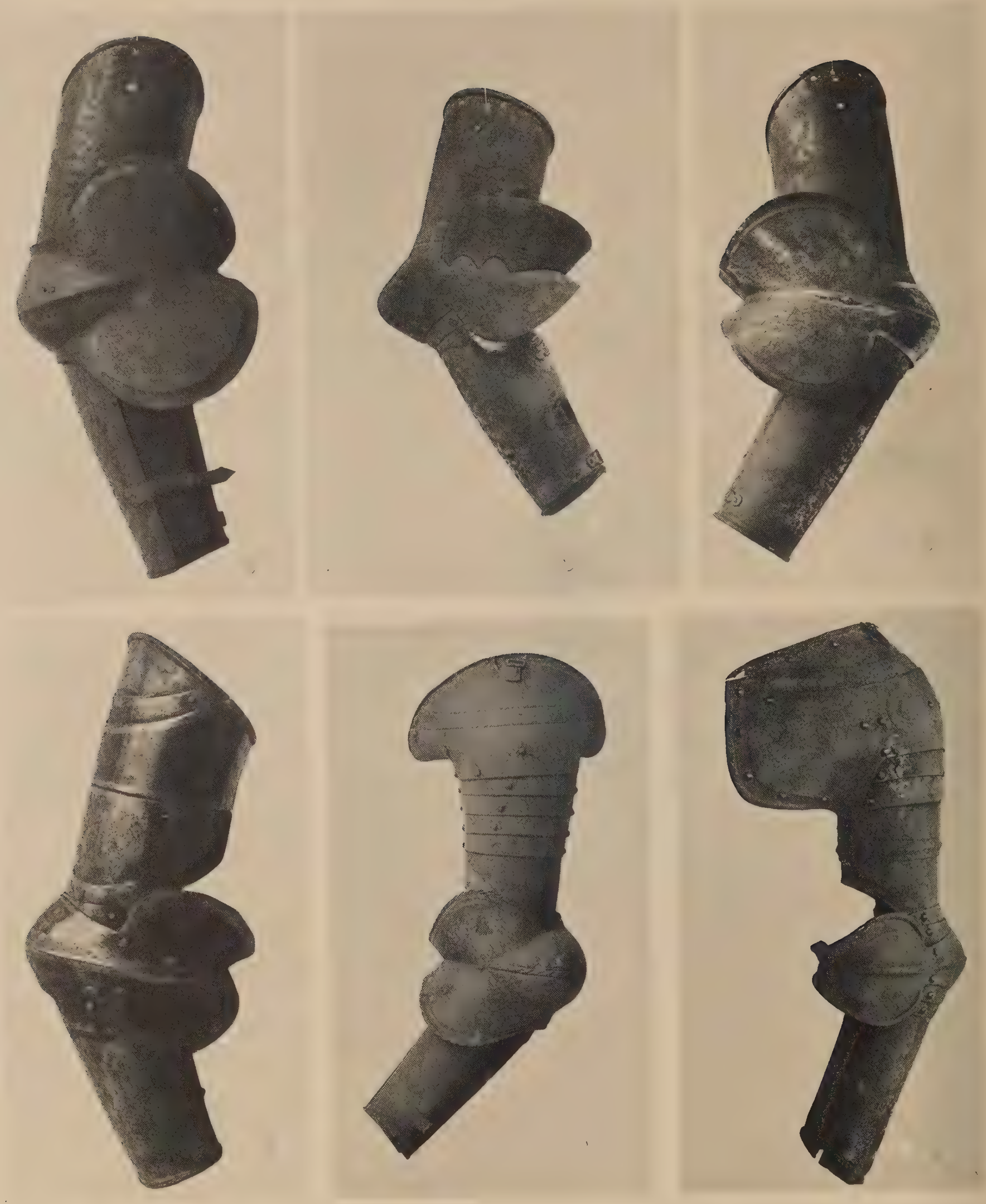

1. Right arm of no. 6 2. Right arm of no. 4 3. Left arm of no. 5 4. Right arm of no. 12 5. Left arm of no. 14
6. Left arm, embossed with volutes on the pauldron, second half of the sixteenth century

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plume-holder in the form of a brass escutcheon, and a row of lining rivets capped with brass and with brass washers in the form of rosettes. A rivet on the right of the neck held the strap for securing the bevor to the skull. The visor is in two parts, pivoted at the sides; the upper part, which contains the two slits for the sight, extends far up the brow and is bordered with a double incised line; the lower part, or ventail, is pierced with a circle of holes on the right side, and has a notch to allow the lifting peg, now missing, to pass through. The ventail is secured to the bevor by a hook and eye. There are two gorget plates on both front and back. The breast-plate is of long peascod form with plain turnover at neck and armholes. On the left side is bolted a lance-rest with spring hinge, blued and gilt. There is one lame at the bottom of the breast, to which are suspended by three straps and buckles on either side a pair of tassets of four lames each. These were removed, like those on the last, from an incongruous association with a fifteenth-century cuirass (now no. 3). A curious feature of the right tasset was that alternate lames had preserved their blued surface almost intact, whereas the intervening two were rusted. The backplate has a vertical line engraved down the spinal hollow. The full arms consist of large pauldrons, each of which is built of three large plates for the shoulders extending well over the armpits front and back, and four smaller plates for the upper arm. These are riveted to the upper part of the turning joint of the vambraces, which are formed of upper cannon, elbow-cop articulated twice above and below with heart-shaped tendon-protector encircling the inside of the joint, and lower cannon. The borders of all the lames are incised with a double line. The well-preserved legs, which were found on the twenty-ninth dummy, consist of cuisses and knee-cops with side wings, with two articulations above the knee and a deep rounded plate below, which suggests that they were intended to be worn with top-boots instead of greaves.

17. This half-suit (pl. CXXVIII, 2) is contemporary with the last, but of inferior quality. The close-helmet has the same general outline, but differs in details. The ridge of the comb and the edge of the gorget plates are roped. A sunk band runs round inside the border of the gorget plate, which is pointed in front. The outline of the ventail is accentuated by an embossed string, lightly roped with a file, which accompanies the engraved lines along the edges at the sides. Like the last, it has an escutcheon for a plume-holder at the back. The lifting peg is missing from the visor proper, and the ventail is held to the bevor by hook and eye, also by a spring catch (now missing) on the left side. The breast-plate has a central ridge and a long peascod belly. A lance-rest is bolted to the right side. There is a skirt of three lames, to which are riveted tassets of four lames each. The skirt is still riveted to the inside of the breast, as found, but should be released. The tassets need re-leathering and setting. The full arms consist of

pauldrons, built of three large plates extending well over the armpits front and back, the right one a little smaller in front, as is often the case, in order to accommodate the lance, and four smaller lames for the upper arm. The bottom one is still attached by a crude rivet to the upper part of the turning joint on the vambraces. These consist of upper cannon, couter articulated once above and below, with narrow heart-shaped extension encircling the inside of the joint, and lower cannons of two parts hinged together in the usual way.

After assembling these suits and portions of suits from a total of seventeen armoured figures, there was left over a pair of arms and a pair of etched gauntlets. The arms (pl. CXXIX, 6) were formerly on the thirty-first dummy, where they were incongruously associated with the fluted cuirass no. 8. They date from the second half of the sixteenth century, and since the three half-suits of that date already possess arms of their own, there is no suit to which they can be appropriately fitted. They belong to a common North Italian type, with volutes embossed on the shoulders in the so-called 'Pisan' style. The pauldrons are built of three large lames on the shoulders, extending well over the armpits front and back, and with sunk borders and roped edges, and three smaller lames on the upper arm. The lowest is attached to the upper part of the turning joint, which is emphasized by a roped and embossed band. Vambraces have short upper cannons, cut well away on the inside for the joint, couters articulated twice above and below. The heart-shaped wings only partially encircle the inside of the joint, and have sunk borders and roped edges. A roped band runs from the centre of the wing to the point of the elbow in the Italian manner. The lower cannons are long and built in the usual two halves, hinged on one side and closing with a pin on the other.

The gauntlets, which were formerly on the fourteenth dummy, consist of cuff and articulated metacarpal plates decorated with etched bands of trophies, etc., in the so-called 'Pisan' manner. The fingers are missing.

The last three half-suits (nos. 15, 16, 17) and the odd pair of arms and gauntlets belong to a later period than the time when the galleries were built and the dummies set up by Brother Francesco d'Aquanegra in the first half of the sixteenth century. As I suggested in my previous paper, they probably found their way into the Sanctuary during one of the restorations of its interior, the most extensive of which took place after the Napoleonic wars. The account of the Sanctuary written in 1825 gives the verses now inscribed below the figures, and they seem to have remained without much alteration since then.

Some idea of the importance of the armour in the Sanctuary can be gathered from the fact that when Sir Guy Laking compiled his great work he listed only five Italian Gothic armours, namely: Vienna 3, Berne 1, New York 1, Turin 1 (but the last really only a half). Since then the publication of the family armour at Churburg has contributed four more (Cat. Trapp and Mann, nos. 18, 19, 20, 21). To these should be added the complete Milanese suit in the Church of the Holy Cross at Schwäbisch-Gmünd[1] in Germany. The six in the Sanctuary now bring the total of unrestored[2] Italian fifteenth-century armours to sixteen.

In 1555 an Englishman in the train of the last embassy sent by a Catholic English sovereign to the Pope visited the Sanctuary of the Madonna delle Grazie on the way to Rome. In the very full and interesting account[3] of all that they saw on the journey, he tells how they went

> 'From Caneto to Mantua, twenty miles; over the river Chiese, through a town called Aqua Negra, where we saw men whip themselves with chains, going after a procession. We passed through a town called Andalesco, and by our Lady of Mantua her chapel, where is the greatest offering in those parts of Italy. There they show pictures [*sic*] of men, which she preserved (as they say), that were stricken into brains and hearts, and in at the backs, with swords and daggers; and where is also such wonderful works of wax, as I never saw the like again.'

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[1] Described and illustrated by the writer in *Archaeologia*, lxxxiv, 87, and pl. XXVIII.

[2] This list does not include composite armours made up of pieces brought together from diverse sources in modern times. Like the suit at Turin, the armour of Petermann Feer at Lucerne is only partially Italian of the fifteenth century.

[3] Printed in *Miscellaneous State Papers from 1501 to 1726*, London, 1788, i, 85. This precedes Donesmondi's account of the Sanctuary by nearly fifty years, and was written when the redecoration of the church was still comparatively new.

APPENDIX

ARMOURERS' MARKS IN THE SANCTUARY OF THE MADONNA DELLE GRAZIE

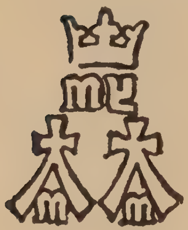


Fig. 3

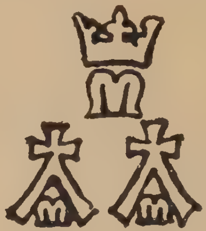


Fig. 9

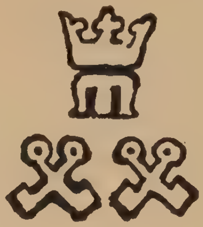
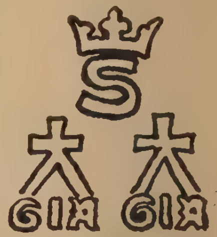


Fig. 10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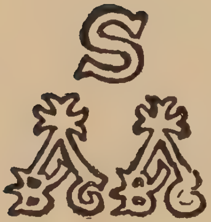
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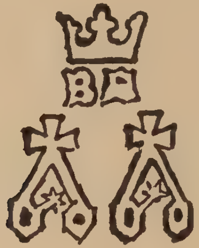
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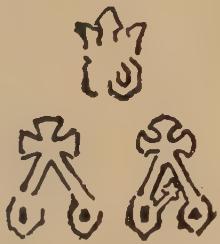
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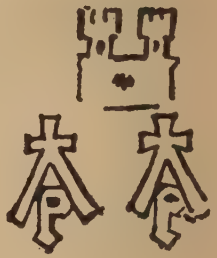
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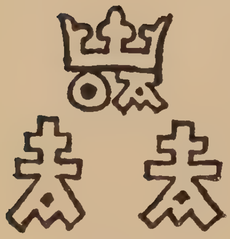
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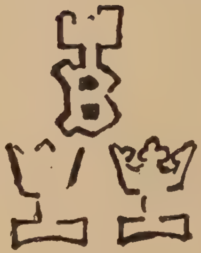
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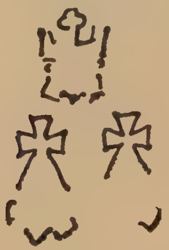
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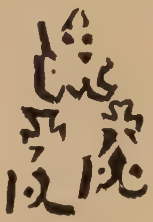
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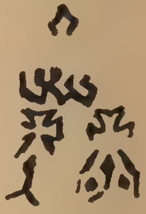
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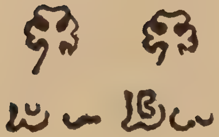
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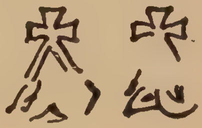
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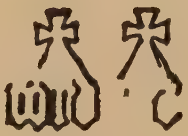
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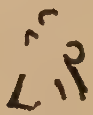
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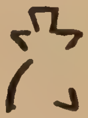
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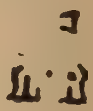
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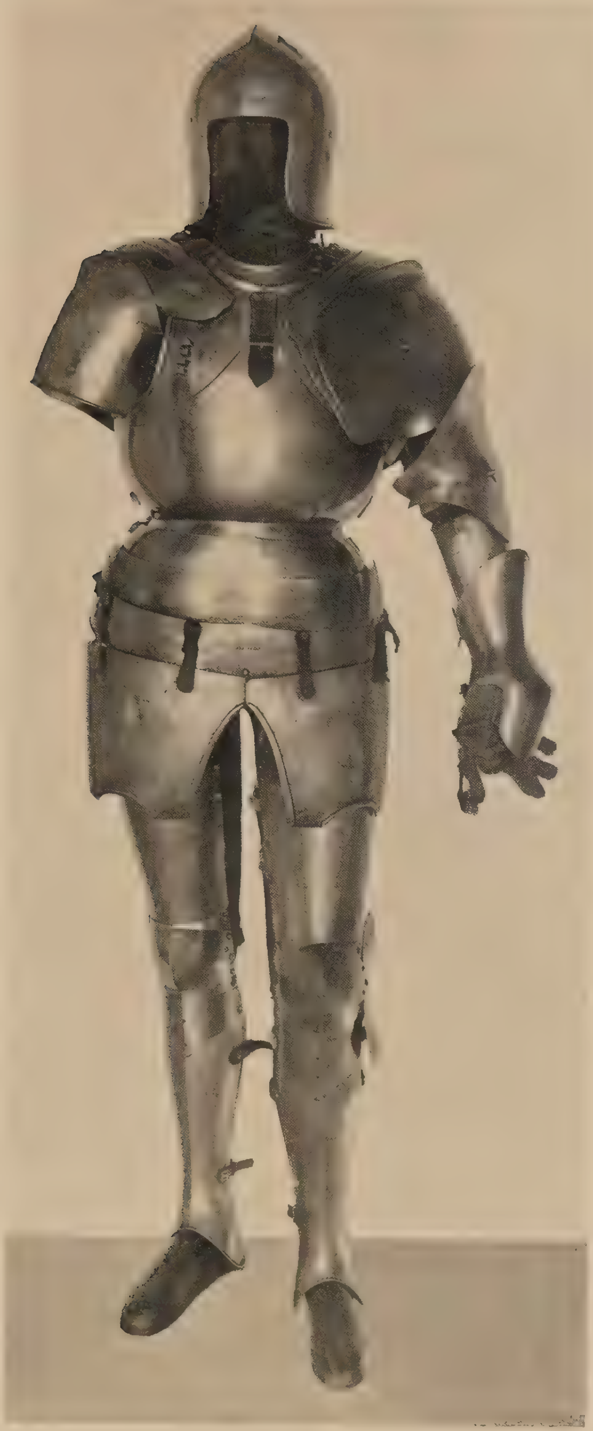

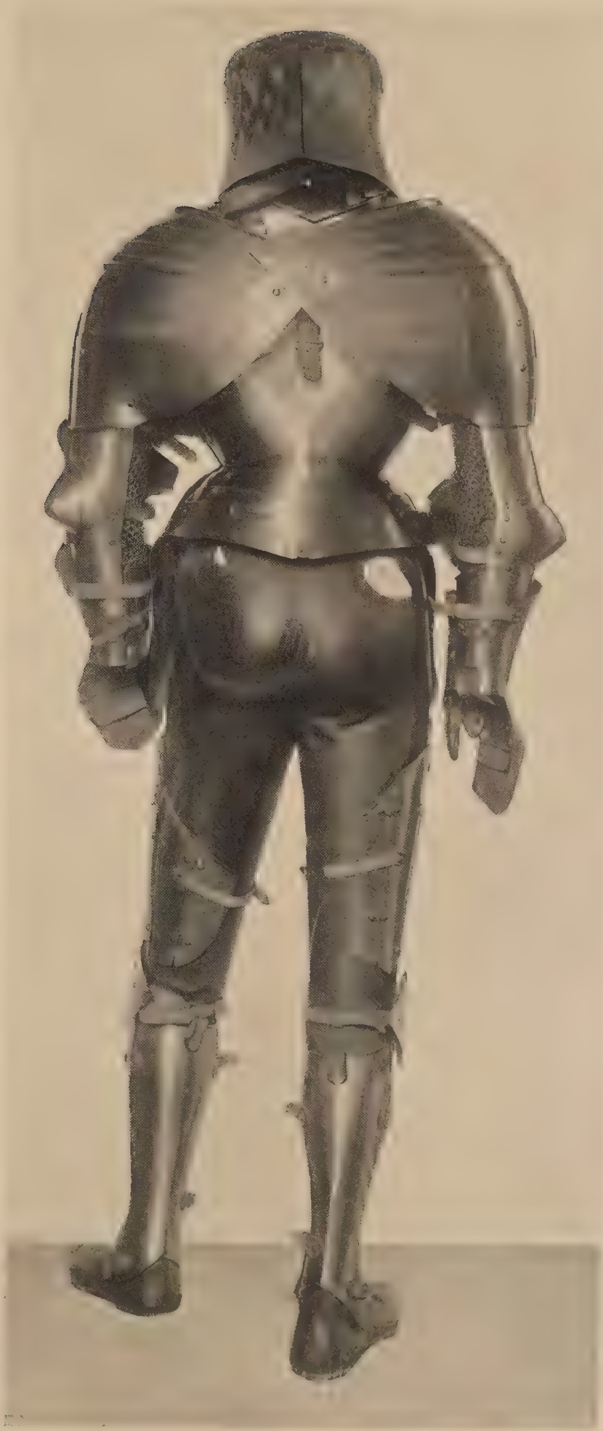

1. Armour of Galeazzo de Arco, *c.* 1450, at Churburg in the possession of Count Trapp. 2. Back view of the armour of Roberto di San Severino, count of Cajazzo, killed at the battle of Calliano in 1487. Vienna, Neue Hofburg

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